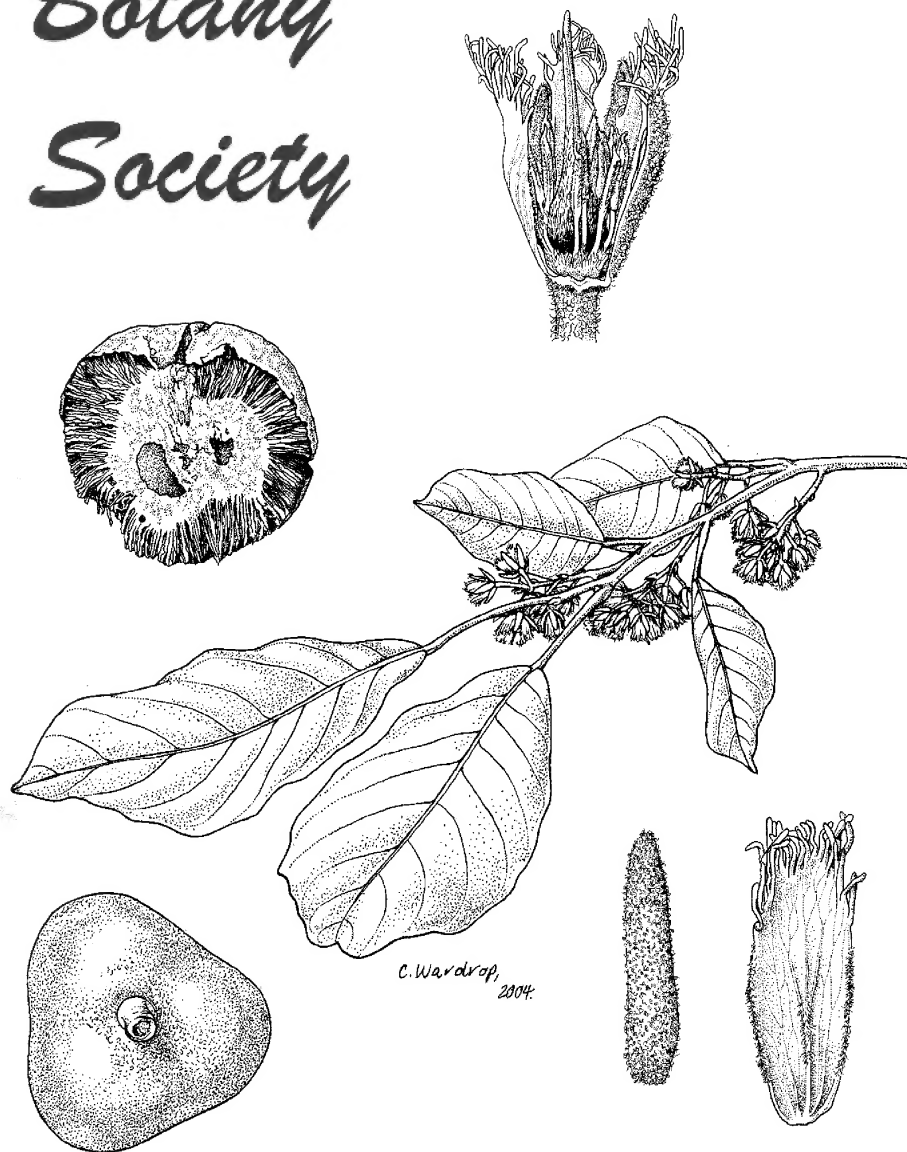


ASBS

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Cover image: *Elaeocarpus sedentarius* Maynard & Crayn.

Leafy twig with clockwise from top: open flower, petal,
sepal, proximal end of fruit, longitudinally sectioned fruit.

Artist: Catherine Wardrop (NSW).

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From the President

Taxonomy Australia

Much progress has been made since the launch of the *Decadal Plan for Taxonomy and Biosystematics* (endorsed by ASBS). One of the first pillars that needs to be built to enable implementation of the Plan is the governance and leadership organ – that is, Taxonomy Australia. This body has now been constituted, initially as a program within the Australian Academy of Science where it will be ‘incubated’ until it can feasibly be spun out into an independent entity. There is a lengthy piece elsewhere in this issue that provides details of the intent and structure of Taxonomy Australia. Your friendly Society will continue to have a key role in driving the Decadal Plan implementation phase through, at least, an ex-officio role for the ASBS President on the Taxonomy Australia Steering Committee.

Genomics for Australian Plants – GAP

We’ve all heard much about the Decadal Plan, but most will not have yet heard much about a second major new initiative borne out of the plant systematics community – the GAP initiative (Genomics for Australian Plants Framework Data Initiative; Web ref. 1). GAP began as a discussion between BioPlatforms Australia (federally funded under the NCRIS, and of which the sequencing service provider we all know and love – AGRF – is a part) and the herbarium community through David Cantrill (MEL). The driver for those discussions was an intent on BioPlatforms’ behalf to provide significant new genomics infrastructure (data or services) to support plant systematics (broadly writ). The key objectives of GAP are threefold:

1. Sequence and assemble representative Australian plant genomes across the plant tree of life to enable better conservation, utilisation and understanding of Australia’s unique plant diversity;
2. Build genomic capacity across Australian Botanic Gardens and Herbaria to create networks collaborating in the collection, management, dissemination and application of genomic data for Australian plants;
3. Provide tools to enable genetic data to be used to identify and classify biodiversity at a range of scales and to use these tools to inform

conservation management and enable better decision making.

A similar project for the mammal research community is well advanced (Web ref. 2). GAP is very broadly inclusive with respect to institutions and key individuals, and the early stages of the constitution of GAP, its governance structures, and its working groups are under way; a number of members of our community have participated in one of more of the discussion workshops that have taken place in Melbourne over the last year, and/or in the two established working groups (Wet Lab, and Bioinformatics). Here is not the place to go into great length about progress so far. Rather, the project will be introduced to those not yet involved via a plenary talk at the Brisbane conference, which will be followed up (I expect) with a written piece for the Newsletter. Suffice to say, engagement with the herbarium community is central to the initiative to ensure that the outcomes are fit for purpose. The Brisbane conference will be a major opportunity to learn more and get involved.

Web references

1. www.bioplatforms.com/australian-plants/
2. www.bioplatforms.com/oz-mammals/

Now available – complete set of back issues of ASBS Newsletter

Members may not be aware that the complete set of back issues of the *ASBS Newsletter* are now available from the ASBS website. The scanning and OCRing of the issues produced in the old ‘hard copy’ days has been a high priority for the last few Councils. Thanks to Russell Barrett, who bit the bullet and did the job single-handedly, this important task is now complete. On behalf of the Society I extend our sincere thanks to him.

You’ll not be surprised to hear that I haven’t read every issue cover to cover, but if I had there would no doubt be an endless stream of treasures to share with you. Perhaps an enthusiastic archivist-type or historian of science will scour this digital gold mine and share the shiniest nuggets with the membership via future issues of the Newsletter. That [cue dull thud] is the sound of a gauntlet being thrown down...

Web ref. www.asbs.org.au/asbs/newsletter.html

Signing off

This year's ASBS conference in Brisbane is now only about seven weeks away. Because my maximum allowable term will end at the AGM on the afternoon of Tuesday the 4th, this is my last report as President of this wonderful Society. It's been great fun, and rewarding. I know the Society

will be in very capable hands going forward judging from the nominees for the 2019 Council positions. With a strong treasury, a healthy membership, and several exciting initiatives now under way, it is an exciting time to be a plant systematist in Australasia!

Darren

Taxonomy Australia report

Introducing *Taxonomy Australia*

This is the first in a regular series of reports on Taxonomy Australia, a new body established following a recommendation in *Discovering Biodiversity: A decadal plan for taxonomy and biosystematics in Australia and New Zealand 2018-2027* released by the Australian Academy of Science and New Zealand's Royal Society Te Apārangi in late April (see Web ref.).

The aim of these reports is to keep the taxonomy and biosystematics community well-informed about Taxonomy Australia and its activities, successes, opportunities, achievements, challenges, and perhaps, occasional failures.

First some introduction. Taxonomy Australia is an organisation established with two main roles – to advocate for taxonomy, taxonomists and taxonomic institutions, and to help achieve the vision of the decadal plan. The medium- and long-term aim is to facilitate substantial reinvestment in taxonomy and biosystematics in Australia.

The decadal plan forcefully argues the case for this reinvestment, but by itself is unlikely to have much impact. Change will only come when governments are convinced that reinvestment in taxonomy and biosystematics is not only important but also broadly supported by the public.

This requires a campaign to win the hearts as well as the minds of the public, to convince as well as to delight and astonish. For this reason, an early task for Taxonomy Australia will be to develop and coordinate a media campaign and communication strategy to raise the profile of taxonomy and biosystematics in the eyes of the public, governments and decision-makers, and to reposition our science as foundational, impactful and 'cool'. Only then will we be able to advocate to governments successfully for the reinvestment we need.

Taxonomy Australia will also continue the work our community started with the decadal plan. The plan is high-level, visionary and a good foundation; it needs to be underpinned by nuts-and-bolts implementation plans if its strategic actions are to be realised. Taxonomy Australia will develop these implementation plans, in collaboration with the community and its existing bodies such as ASBS, the Society of Australian Systematic Biologists (SASB), the Australian Mycological Society (AMS) and the Council of Heads of Australasian Herbaria (CHAH) and Council of Heads of Australian Faunal Collections (CHAFC).

Crucially, Taxonomy Australia needs to serve the taxonomy and biosystematics community and represent its interests. To that end, a Steering Committee has been established with broad representation across sector organisations. Current members of the Steering Committee are:

- John Huisman (Council of Heads of Australasian Herbaria)
- Leo Joseph (Council of Heads of Australian Faunal Collections)
- Darren Crayn (Australasian Systematic Botany Society)
- Mike Rix (Society of Australian Systematic Biologists)
- Tom May (Australasian Mycological Society)
- Sue Fyfe (Australian Biological Resources Study)
- Hamish Holewa (Atlas of Living Australia)
- To be appointed - two representatives from the university sector and two early to mid-career researchers (EMCRs).

The Steering Committee has a role to provide strategic direction and advice on Taxonomy Australia's operations and workplans, to

communicate and represent Taxonomy Australia and its actions and activities to members' respective organisations, and to build trust, communication and a shared sense of purpose within the taxonomy and biosystematics community, and with stakeholders.

Initially, Taxonomy Australia is being established as a program of the Australian Academy of Science, which facilitated and hosted the development of the decadal plan with seed funding from the Ian Potter Foundation and from community and institutional partners including ASBS. Further funding to the Academy from the Department of Agriculture and Water Resources and Department of the Environment and Energy following the launch of the decadal plan, has provided a funding base for the establishment of Taxonomy Australia.

The Academy is essentially acting as an incubator for Taxonomy Australia, allowing its establishment with minimum overhead, and supporting its early operations. Once established and sustainable, the intention is that Taxonomy Australia will spin out from the Academy as an independent body, akin to professional peak bodies representing other sectors of science such as Astronomy Australia or the Australian Institute of Physics.

In addition to the community-based Steering Committee, a high-level, six-member Advisory Committee, which reports directly to the Academy's Executive Committee, has overall oversight and responsibility for both Taxonomy Australia and the decadal plan project.

After consideration of various models by the Academy and the Advisory Committee, Taxonomy Australia is being structured as a membership organisation. Membership will be open to individuals, corporations, and institutions,

anyone or any body involved in, interested in, or supportive of taxonomy and systematics. Members of Taxonomy Australia will be able to keep abreast of taxonomic and biosystematic discoveries, learn more about our science and about biodiversity in Australia, and help support the vision of the decadal plan and guide taxonomy and biosystematics during the next decade and beyond.

Crucially, Taxonomy Australia will have paid (full-time, part-time or seconded) staff, who will be entirely focused on its activities and mission. While Taxonomy Australia remains within the Academy, my position as leader of the decadal plan project has been extended, to establish Taxonomy Australia and develop a sustainable funding model. The plan is that other positions will be added as funding becomes available.

I'm hopeful that Taxonomy Australia will indeed prove sustainable and will be able to grow over the next few years. We have never really had a body in Australia quite like it. With support and strategic direction from the community, it has a good chance of success in achieving the shared vision of the decadal plan.

So far, most activity has been around establishing Taxonomy Australia and its committees and governance framework. Future reports will give more details about Taxonomy Australia's workplan for 2019 and its actual activities. Please watch this space.

One final shout-out. In addition to the Steering and Advisory Committees, a Working Group established during the drafting phase of the decadal plan will continue as a Reference Group for Taxonomy Australia. The Reference Group is an open, broad-based and inclusive supporting group, which has a role to provide a sounding board and think-tank for Taxonomy Australia and

Australasian Systematic Botany Society Inc.

2018 Annual General Meeting

The Annual General Meeting of the Australasian Systematic Botany Society Inc. will be held
at 5pm on Tuesday 4th December 2018
in the Auditorium of the Brisbane Botanic Gardens, Mt Coot-tha

The purpose of this meeting is to:

- confirm the minutes of the annual general meeting held on 28th November 2017 (see *ASBS Newsletter* 173: 2–19);
- receive reports from Council on activities of the Society during the preceding financial year;
- declare the results of the vote for membership of Council.

the decadal plan project as a whole. Reference Group members discuss, debate and advise on issues that need to collective wisdom of our community to get right. If you would like to join the Reference Group, please contact me at the email address below.

Web ref. <https://www.science.org.au/support/analysis/decadal-plans-science/discovering-biodiversity-decadal-plan-taxonomy>

Kevin Thiele
Interim Director, Taxonomy Australia
kevin.thiele@science.org.au

Articles

“Bagster”: *lapsus calami* for Baxter (William)

E. Charles Nelson
tippitiwitchet@phonecoop.coop

Alex George (2009: 286) drew attention to this *lapsus calami* without providing any details, while in my recent account of William Baxter (fl. 1792–1832) (Nelson 2018: 17 footnote 1), I noted that specimens bearing this surname are in the herbarium of the Royal Botanic Gardens, Kew. The *lapsus calami* led its originator, George Bentham (1842: 327 #16), to give the name *Acacia bagsteri* to a Western Australian species. Bentham’s scientific name was “corrected” as early as 1848 by the German plantsman and horticulturist Julius Friedrich Wilhelm Bosse (1788–1864), of Oldenburg, in *Neuere Zierpflanzen* (1849), which was the fourth volume of the second edition of his *Vollständiges Handbuch der Blumengärtnerei ...* (see Stafleu and Mennega 1993: 370–371). He seems to have taken note of Johann Georg Christian Lehmann’s (1792–1860) comment “nonne rectius *Baxteri*?” added parenthetically to the entry for *A. bagsteri* in *Plantae Preissianae* (Lehmann 1844: I: 7 #13).

Bentham, in his “Notes on Mimoseae” (1842), cited “Bagster” as collector under six species, namely *Acacia bagsteri* (#16), *A. armata* (#19), *A. ramosissima* (#116), *A. ligulata* (# 137), *A. nigricans* (# 219) and *A. obscura* (# 220). No other publication seems to contain the name “Bagster” for a collector of natural history specimens, although the surname does exist – there was a notable bookseller and publisher named Samuel Bagster in business in London in the early 1800s, and a number of William Bagsters are indicated in searches of ancestry web sites (Web refs. 1, 2).

Interrogating the on-line catalogue of the herbarium of the Royal Botanic Gardens, Kew, where George Bentham’s herbarium was deposited, only yielded (accessed 6 August

2018) one specimen collected by “Bagster”: *Paraserianthes lophantha* (= *Acacia lophantha*) (K000759569) (Fig. 1a). This has a circular handstamp on the sheet reading “HERBARIUM BENTHAMIANUM 1854” with a printed label reading “King George’s Sound, / New Holland. Hooker, 1835. / Bagster.” The date is altered by hand to 1838.

Using different key terms – Hooker plus Australia, or simply Baxter – yielded further results. All had the round handstamp and a printed label with “Bagster” with the printed date “1835”.

Alyxia buxifolia [Apocynaceae]
(K000894124).

Lechenaultia formosa [Goodeniaceae]
(K000215272).

Acacia “bagsteri” [Leguminosae] “Hooker, 1838” [date altered by hand] (K000791347) (Fig. 1b).

Acacia leiophylla [Leguminosae]
(K000791858).

Chorizema rhombeum [Leguminosae]
(K000642538) [“Bagster” altered to Baxter by M. D. Crisp].

Pultenaea empetrifolia [Leguminosae]
(K000978033).

unidentified [Leguminosae] (K000278370).

Petrophile teretifolia [Proteaceae]
(K000736565).

Two specimen of *Stylidium* also bear a “Bagster” printed label but with the collector’s name amended to Maclean (*S. repens* K000741760; *S. squamotuberosum* K000060234), indicating that Bentham did not have any labels printed for John Maclean who arrived in Australia in April 1829 to take up a post in Sydney Botanic Garden. Similarly, Maclean’s name was added in

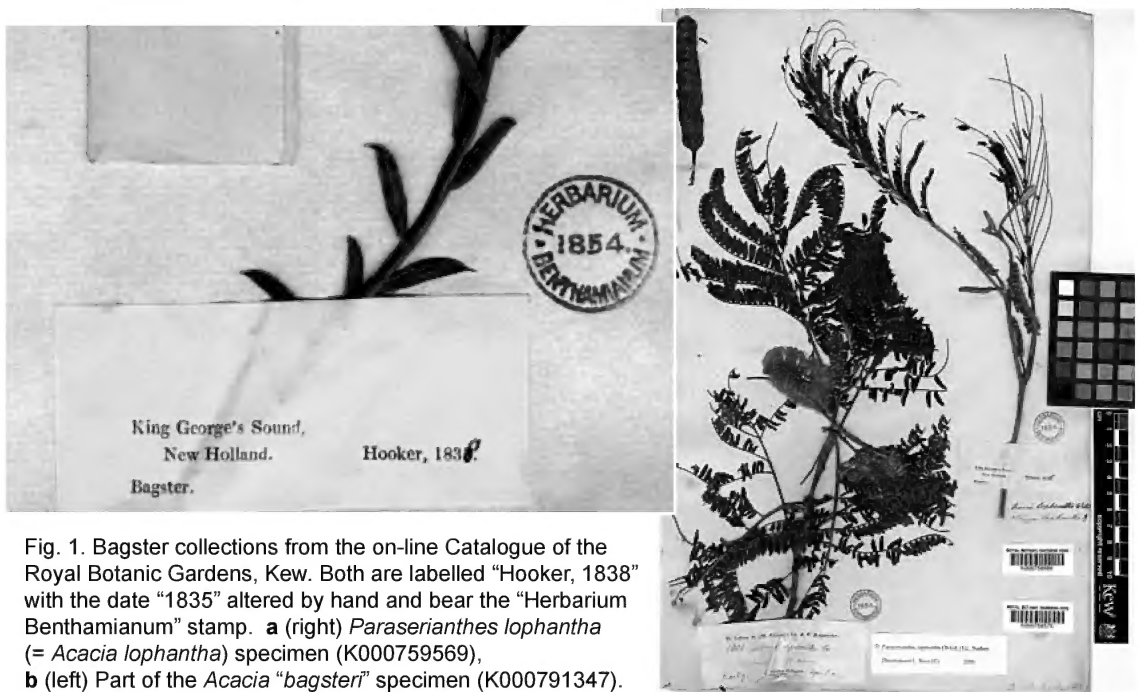


Fig. 1. Bagster collections from the on-line Catalogue of the Royal Botanic Gardens, Kew. Both are labelled "Hooker, 1838" with the date "1835" altered by hand and bear the "Herbarium Benthamianum" stamp. **a** (right) *Paraserianthes lophantha* (= *Acacia lophantha*) specimen (K000759569), **b** (left) Part of the *Acacia* "bagster" specimen (K000791347).

manuscript on "Bagster / Hooker, 1835" labels attached to specimens of

Gompholobium capitatum [Leguminosae]
(K000642691).

Utricularia multifida [Lentibulariaceae]
(K000779872).

Stylidium luteum [Stylidiaceae]
(K000355086).

Stylidium scandens [Stylidiaceae]
(K000060292).

Stylidium spinulosum [Stylidiaceae]
(K000060338).

When these various specimens are studied a pattern emerges of material from Bentham's herbarium with printed labels, variously amended. "Hooker, 1835" and the manuscript date 1838 make no sense. While Joseph Dalton Hooker (1817–1911) did visit Australia in 1840 and 1841, in 1834 he was but a teenager, and his father William Jackson Hooker (1785–1865) never ventured outside Europe, so neither man could have collected these specimens, if the dates are correct. The most likely explanation is that Bentham was given the specimens by W. J. Hooker and proceeded to have sets of labels printed on which the dates referred to the year Bentham received the material. William Baxter's surname was misprinted as "Bagster" and Bentham either never noticed this or decided

that changing dozens of labels by hand was not a good use of his time. There are other specimens of Australian origin, for example from Richard and Allan Cunningham, similarly labelled with the same style of printed label and likewise with improbable dates.

It is likely that there are other "Bagster" specimens with these misleading labels in the Kew herbarium, but they have not yet been photographed and made available on-line.

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- Web ref. 1. www.findmypast.co.uk
- Web ref. 2. www.ancestry.co.uk

Note on the type of *Acacia latifolia* Benth.

Tony Orchard
Canberra

Bentham (1842) described a new species *Acacia latifolia*, based on the specimen "N.Coast?, Bauer". Pedley (1978) cited as type of the species a Robert Brown specimen in BM, with a duplicate in K: "Carpentaria Islands h–g, 16–25 Dec. 1802, Brown "4378" (BM, holo; K, iso)." This was in effect a neotype, as the collector did not match that in the protologue. This type citation was followed by Tindale et al. (2001).

There is however a specimen in Kew herbarium which exactly matches the protologue. This specimen (K793971) is a Bauer collection from "Australia", sent from the Vienna herbarium in 1837, presumably to Bentham, because the sheet bears his "Herbarium Benthamianum 1854" circular handstamp. This specimen was therefore available to Bentham at the time he described the species, and should be considered the holotype.

Its existence overrides the neotype designation above.

The full label inscription is "Acacia latifolia Benth. / Lond. Journ. 1. 382 / Australia Bauer / Herb. Vind. 1837." The sheet can be viewed in the Kew Herbarium on-line catalogue (Web ref.).

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- Pedley, L. (1978), A revision of *Acacia* Mill. in Queensland, Part 1. *Austrobaileya* 1(2): 163.
- Tindale, M.D. et al. (2001) *Acacia latifolia* Benth., in A.E. Orchard & A.J.G. Wilson (eds), *Flora of Australia* 11B: 159. (ABRS: Canberra / CSIRO Publishing: Melbourne).
- Web ref. <http://static1.kew.org/herbcatimg/393779.jpg>

Plant blindness

R.M. Barker
State Herbarium of South Australia

I came across the use of this term in the *Wall Street Journal* in August in an article by Douglas Belkin entitled *Rhododendron? Hydrangea? America doesn't know any more* (Web ref. 1) and marked it for use in this issue of the newsletter. However by the time I came to revisit it the article had disappeared behind a paywall. Interesting therefore to see that the phenomenon was not confined to America but also popped up on the *BotanyOne* page (Web ref. 2), complete with a student video, and also twice on *The Conversation* (Web refs. 3 and 4).

In 1998, American botanists and science educators James Wandersee and Elisabeth Schussler first introduced the term 'Plant Blindness' in a poster and paper presented at Louisiana State University. In 2001 they were invited to present their views on the subject in an article in the Botanical Society of America's quarterly *Plant Science Bulletin* (Wandersee & Schussler 2001) and this whole article is well worth revisiting (hyperlinked below). They defined plant blindness as:

The inability to see or notice the plants in one's own environment—leading to: (a) the inability to recognize the importance of plants in the biosphere, and in human

affairs; (b) the inability to appreciate the aesthetic and unique biological features of the life forms belonging to the Plant Kingdom; and (c) the misguided, anthropocentric ranking of plants as inferior to animals, leading to the erroneous conclusion that they are unworthy of human consideration

Symptoms exhibited by those who suffer plant blindness include

- (a) failing to see, take notice of, or focus attention on the plants in one's daily life;
- (b) thinking that plants are merely the backdrop for animal life;
- (c) misunderstanding what kinds of matter and energy plants require to stay alive;
- (d) overlooking the importance of plants to one's daily affairs;
- (e) failing to distinguish between the differing time scales of plant and animal activity;
- (f) lacking hands-on experiences in growing, observing, and identifying plants in one's own geographic region;
- (g) failing to explain the basic plant science underlying nearby plant communities—including plant growth, nutrition, reproduction, and relevant ecological considerations;
- (h) lacking awareness that plants are central

to a key biogeochemical cycle—the carbon cycle; and
(i) being insensitive to the aesthetic qualities of plants and their structures—especially with respect to their adaptations, coevolution, colors, dispersal, diversity, growth habits, scents, sizes, sounds, spacing, strength, symmetry, tactility, tastes, and textures.

Suggestions were made of how the problem might be overcome in the US, amongst them the distribution of a poster to 20,000 teachers, the production of a children's book *Lost Plant* and advocating a role for Botanic Gardens in education of the public about plants (Allen 2003).

Since then the term has cropped up periodically in the literature, but suddenly it seems to have suffered a reincarnation perhaps because some of the results of plant blindness are coming to fruition. In the case of the *Wall Street Journal* article Plant Blindness has been blamed for a lack of scientists able to deal with such issues as invasive plants and landscape restoration in large government organisations in the US simply because they are unable to distinguish between plants. In Britain it has been blamed for a lack of horticulturists and botanists as well as universities no longer offering any Botany degrees (Web ref. 5). The first article listed below in *The Conversation* has an Australian author and deals with the plant/animal divide and why humans relate better to animals and consequently fund their study more, while the second has a South African perspective and deals with the need for better educated plant scientists if we are to deal with global problems such as food security and plant diseases, not to mention environmental

degradation. If you are not sick of the subject by now you can read a lecture on the topic by Dr M in Japan (Web ref. 6) or see a TED lecture “A Cure for Plant Blindness” by Margaret Conover (Web ref. 7). Or if you want an example close to home have a look at the report on the reversion of Dirk Hartog Island to what it was 400 years ago (Web ref. 8) and see what is missing.

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- Web ref. 2: <https://www.botany.one/2018/08/raising-awareness-of-plant-blindness/>
- Web ref. 3: <https://theconversation.com/people-are-blind-to-plants-and-thats-bad-news-for-conservation-65240>
- Web ref. 4: <https://theconversation.com/plant-blindness-is-a-real-thing-why-its-a-real-problem-too-103026>
- Web ref. 5: <https://www.theguardian.com/lifeandstyle/gardening-blog/2015/sep/17/we-need-a-cure-for-plant-blindness>
- Web ref. 6: <http://drmgoeswild.com/plant-blindness-in-japan/>
- Web ref. 7: <https://www.youtube.com/watch?v=sUzrRo1T274>
- Web ref. 8: www.abc.net.au/news/2018-10-14/dirk-hartog-island-being-sent-400-years-back-in-time/10368926

Awards

Allan Mere Award to Ilse Breitwieser

Congratulations to Ilse Breitwieser, recipient of the 2018 Allan Mere Award of the New Zealand Botanical Society. The award is made to outstanding botanists to acknowledge their contribution and work.

The mere is a traditional Maori hand club made from greenstone / pounamu / nephrite and carved at Westland Greenstone Ltd in Hokitika. It was originally presented to the former DSIR Botany Division by the late Dr Lucy Moore in 1982 to commemorate the 100th anniversary of the

birthday of H.H. Allan – the first Director of the former DSIR Botany Division, and author of the first volume of the DSIR New Zealand Flora series. It was Lucy's intention that the award be presented – not necessarily annually – to those staff members who had made the most significant contribution to New Zealand botany.

With the demise of the DSIR Botany Division the Allan Mere was passed over to the New Zealand Botanical Society who now make their selection from candidates nominated by the various regional



Fig. Anthony Wright, President of the New Zealand Botanical Society, presenting Ilse Breitwieser with the Allan Mere.

botanical societies. Ilse was nominated by Patrick Brownsey and Wendy Nelson, and the nomination was supported by four regional botanical societies, the New Zealand Plant Conservation Network (NZPCN) and 15 botanical associates from New Zealand and Australian institutions. Excerpts from the various nominations have been reproduced in the *New Zealand Botanical Society Newsletter* (Cameron 2018). To quote just one:

[Ilse] has made very substantial contributions to New Zealand taxonomy and systematics, in her previous capacity as Portfolio Leader of Landcare Research's Characterising Land Biota portfolio, as an Executive Member of the Council of Heads of Australasian Herbaria, more recently as a Council Member of the International Association of Plant Taxonomy, and above all as a taxonomist and systematist of high standing. Her professionalism, leadership, and dedication to the field of taxonomy and systematics are exemplary, as are her advocacy for, and representation of New Zealand botany on a world stage.

The Allan Mere is kept on display in the entrance to the Allan Herbarium at Landcare Research in Lincoln and so Ilse will be very familiar with it (Fig.).

Reference

Cameron, E. (2018). Allan Mere Award 2018. *New Zealand Botanical Society Newsletter* 133: 2–3.

BioOne Ambassador Award to Ben Anderson

BioOne has announced Ben Anderson as the winner of one of five BioOne Ambassador Awards for 2018. The award honors early career researchers who best communicate their specialized research beyond their immediate discipline and to the public at large. Individuals were selected from a large pool of nominees from within the BioOne publishing community (consisting of several hundred biological journals) and nominees were then invited to submit a 250-word, plain-language summary in response to the question: "How do the results of your work apply across disciplines and to the public?"

Ben was nominated for the award by CSIRO Publishing for the publication of part of his PhD work, a revision of the *Triodia basedowii* complex (Anderson et al. 2017). At the time of publication this work received publicity from the

ABC, primarily because one of the species had the flavour of salt and vinegar chips (Web ref. 1). Ben was a recipient of an Eichler Award in 2014 (see his report in *ASBS Newsletter* 172).

You can read Ben's submission and those of the other winners on the BioOne website (Web ref. 2).

References

Anderson B.M., Thiele K.R. & Barrett, M.D.

(2017). A revision of the *Triodia basedowii* species complex and close relatives (Poaceae: Chloridoideae). *Australian Systematic Botany* 30(3): 197–229. <https://doi.org/10.1071/SB17011>

Web ref. 1: www.abc.net.au/news/2017-11-13/salt-and-vinegar-chips-flavour-spinifex-discovered-by-scientists/9140054

Web ref. 2: <http://bioonepublishing.org/BioOneAmbassadorAward/2018B1AAWinners.html>

ABRS report

Staff updates

Mia Sandgren joined the ABRS in July 2018 to work on a short-term project to assess the state of the *Flora of Australia* (FoA, web ref. 1). This includes reviewing current gaps and updates required to legacy content, to inform future priorities for building the FoA. Mia is currently a graduate with the Department of the Environment and Energy. She previously completed a Bachelor of Philosophy with Honours in geography at the Australian National University. Tony Orchard continues to provide volunteer associate editorial support for the FoA.

Flora of Australia

Content building is ramping up for the FoA. The ABRS has engaged a team of botanists at the Royal Botanic Gardens Victoria on a short-term contract to prepare family-level taxon profiles for about two thirds of the Australian vascular plant families. Work is already under way and Phillip Kodela visited Melbourne in late August to provide training support for managing FoA content on the new platform. The RBGV will both create new profiles and update legacy FoA treatments to align them with the Australia Plant Census. This will build momentum for filling gaps in the FoA by providing the framework for a top-down approach to completing flora treatments.

Phillip Kodela is making good progress revising the FoA *Acacia* treatment, with assistance from Tony Orchard and edits provided by Bruce Maslin. The ABRS is grateful for new contributions to the FoA, including treatments of Anarthriaceae and *Lepyrodia* (Restionaceae) from Barbara Briggs with Carolyn Connelly and Siegfried Krauss. Other recently published treatments include Balsaminaceae by Russell Barrett and Sphenocleaceae by Marco Duretto.

The ABRS is grateful for the strong engagement of the FoA Advisory Group in the development of governance and workflow processes for managing FoA content on the new digital platform (Web ref. 1). This is informing development of new FoA Contributor Guidelines. The ABRS expects to have an early draft of the guidelines ready for circulation in the coming months.

Please contact the ABRS at our email address below with any feedback about the FoA content and platform functionality, or if you would like to

contribute new taxon profiles or update existing descriptions.

WATTLE: Acacias of Australia

On 1 September 2018 (Wattle Day) the *WATTLE: Acacias of Australia* Lucid key (version 3) was released as a new downloadable smartphone App. This App retains the best characteristics of earlier editions of WATTLE but includes more species and adds features that make species identification easier and more accurate. The WATTLE App can be downloaded to an Android/Apple smartphone or tablet. No phone or Wi-Fi connection is required to use the key, making it especially valuable for people working in the field. For more information on how to purchase a copy of the App or access the free web version, see Identic's media release (Web ref. 2).

ABRS is proud to have had the opportunity to partner with botanist Bruce Maslin, the Western Australian Herbarium and Identic P/L in the production of this updated Lucid identification key.

Bush Blitz

Jumping Fortini won the public vote for the Bush Blitz spider naming competition (Web ref. 3). The name was nominated by three students from Perth Grammar School in honour of their science teacher Ellen Fortini. Dr Barbara Baehr is currently writing the paper to describe the species.

A Bush Blitz Scientific Reference Group (SRG) has been established with Linda Broadhurst and Miguel deSalas representing the botanical community. The first expedition will be held in the ACT from 26 November to 6 December to launch the next five years of Bush Blitz. The Blitz will include a strong educational and promotional focus with teachers being part of the expedition through Bush Blitz TeachLive. Other events will include a teacher workshop for local teachers, a community day to be held at the Australian National Botanic Gardens and a planned "open lab" event at Parliament House to help promote the Decadal Plan with the assistance of the Academy of Science.

The remaining 14 expedition locations for this round of Bush Blitz are currently being reviewed by Bush Blitz and the SRG.

Grants

The 2019-20 National Taxonomy Research Grant Program (NTRGP) Research Grants and Capacity-Building Grants rounds are likely to open to applicants in mid-October 2018. Botanists interested in undertaking taxonomic or systematics research are encouraged to submit project proposals once the parallel grant rounds are opened. More information about the NTRGP is available on the ABRs website (Web ref. 4).

Web references

- 1: www.ausflora.org.au
- 2: identic.com.au/blog/wattle-acacias-of-australia-media-release/
- 3: www.instagram.com/bushblitz/
- 4: www.environment.gov.au/science/abrs/grants/

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ABRS

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September 2018

News

Wattle day and Wattle

You may be surprised just how widespread the celebration of Wattle Day is in the Australian community. The Wattle Day Association lists celebrations held around Australia and they present an annual Golden Wattle Award – this year to Craig Challen and Richard Harris, part of that amazing rescue of the boys of the Thai soccer team. They are also raising funds for drought-affected farmers. *The Sydney Morning Herald* (Web ref. 2) took the opportunity to retell the story of why it is the Wattle we celebrate rather than the Waratah, while the Australian Republican Movement explains its significance to their society (Web ref. 3).

Those who are botanically minded however will be very pleased to see that Wattle Day was this year used to launch the online version of WATTLE version 3 (also available as an app for AU\$9.95). You can read more about this in the ABRs Report on p. 9 or in media releases (Web ref. 4, 5).

WATTLE ver. 3 is jointly published by the Australian Biological Resources Study (ABRS), Canberra, The Western Australian Department of Biodiversity, Conservation and Attractions (formerly CALM) and Identic Pty Ltd, Queensland. Congratulations to all concerned in this impressive outcome.

Web references

- 1: www.wattleday.asn.au/
- 2: <https://www.smh.com.au/entertainment/wattle-day-how-nationalism-and-golden-boughs-beat-off-the-waratah-20180823-h14di7.html>
- 3: <https://independentaustralia.net/australia/australia-display/wattle-you-be-doing-on-national-wattle-day,11841>
- 4: www.environment.gov.au/mediarelease/what-

wattle-new-app-holds-answer

- 5: <http://identic.com.au/blog/wattle-acacias-of-australia-media-release/>

Brazil's National Museum fire

In early September it was devastating to read of the fire which destroyed Rio de Janeiro's National Museum, the oldest scientific museum in Brazil. The Museum was founded in 1818 and contained a collection of around 20 million scientifically and culturally invaluable artifacts. While herbarium specimens were not involved, some impression of just what material was lost can be seen at Web ref. 2.

Recriminations have been many. The Museum, celebrating 200 years of existence this year, and apparently just about to receive \$5 million for an overhaul that included a fire-suppression system, was in a poor state along with much of the infrastructure in Rio de Janeiro and greater Brazil (Web ref. 3). Its budget for maintenance of the building had been slashed over the last few years.

It was heartening to read firstly of the support of fellow scientists (Web ref. 4 & 5) and also to read that local students have been quick to ask for images of the Museum so that it can be remembered:

In the face of tonight's tragedy, the students of the museology course at UNIRIO [the Federal University for the State of Rio de Janeiro] are mobilizing to preserve the memory of the National Museum," the Museu Nacional said in an email. "We ask everyone who possesses images (photographs/videos/even selfies) of the collection and exhibition spaces to share them with us." (Web ref. 6).

Web references

- 1: <https://www.nationalgeographic.com/>

[science/2018/09/news-museu-nacional-fire-rio-de-janeiro-natural-history/](https://www.nytimes.com/2018/09/03/world/americas/brazil-museum-fire.html)

- 2: <https://www.theatlantic.com/science/archive/2018/09/brazil-rio-de-janeiro-museum-fire/569299/>
- 3: <https://www.nytimes.com/2018/09/03/world/americas/brazil-museum-fire.html>
- 4: <https://waynemaddison.wordpress.com/2018/09/03/to-the-heroes-of-brazils-national-museum/>
- 5: www.spnhc.org/news/view/166
- 6: <https://www.nationalgeographic.com.au/people/grief-and-anger-mingle-after-devastating-brazil-museum-fire.aspx>

A letter of reassurance from Ruy J.V. Alves, Prof. Titular, PhD, Curador do Herbário R, was circulated by email to allay concerns around the world.

The R herbarium (Museu Nacional, Rio de Janeiro) did not burn!

Rio de Janeiro, Sept. 4th 2018,

Dear colleagues,

The Museum palace burned down and mostly everything housed in it was lost. A damage assessment is now in progress by a large team of different authorities.

It seems that a thousand of my friends just deceased simultaneously. And yes, the work of thousands of colleagues, past and extant, just turned to ashes. The World just lost many million scientific treasures. All numbers in the media are nothing but rough (under)estimates.

As the curator of the R Herbarium I am relieved to inform that in 2007 the herbarium (with ca. 650 thousand specimens and 8 thousand types) was moved out of the palace (main building of the Museu Nacional) into a new building built mostly with collections in mind, which is now known as our Department of Botany. While conditions are not ideal at the herbarium, we are managing to keep material safe and under study.

With the fire we temporarily lost some institutional functionality such as access to postal service and Internet. Please rest assured that the botanical material you lent us is well accommodated and safe for now. We shall be returning it as soon as institutional functionality is minimally restored.

I am sending this from my home, and ask you to kindly spread word of this to other

curators. ... 100% of the herbarium is safe at this moment.

With my kind regards!
Ruy José Válka Alves,

IAPT embraces the web and social media

Received from IAPT Councillor Kevin Thiele this notice:

The International Association for Plant Taxonomy (IAPT) has joined the 21st Century, with a brand new website [Web ref. 1], new Facebook page [Web ref. 2], and Twitter [Web ref. 3] and Instagram [Web ref. 4] handles. The IAPT supports international taxonomy and systematics of algae, fungi and plants, including but by no means limited to management of the International Code of Botanical Nomenclature. Amongst other things, the new website features an international jobs board for positions, PhD places and postdocs in botanical, phycological and mycological taxonomy and systematics. If you're in the market for a job, keep an eye on this; if you have a position to advertise, you can reach a global audience through IAPT.

Web references

- 1: <https://www.iaptglobal.org/>
- 2: <https://www.facebook.com/pg/iaptglobal/>
- 3: <https://twitter.com/iaptglobal>
- 4: <https://www.instagram.com/iaptglobal/>

Use of art to warn of climate change effects

Georgian artist Tezi Gabunia's has a very telling way of warning of the effects of climate change.

Web ref. <https://mymodernmet.com/flooding-of-the-louvre-tezi-gabunia/>

Branch Out features Barbara Briggs

The latest episode of *Branch Out*, the podcast of the Royal Botanic Garden Sydney, features Barbara Briggs and her reflections on changes which have happened over the 59 years of her involvement with the Gardens.

Web ref. <https://www.rbgsyd.nsw.gov.au/science/branch-out/barbara-briggs-detective-botany-dna>

Oops!

Noted on the Allan Herbarium FaceBook page was the use of the image of a foreign butterfly rather than a native one on NZ Post's latest release of postage stamps. The stamps have been released to mark the goal of Predator Free 2050, which aims to remove key mammalian predators from the New Zealand landscape by 2050.

Web ref. https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12118561

How are we communicating the importance of Taxonomy?

This was the title of a special Linnean society meeting held on the 7th September 2018. The day was divided into four themes and the powerpoint and audio files for all of the presentations can be downloaded on-line (Web ref.). There is also a report of the day. One of the outcomes was the recognition that the outlawing of the collection of natural history items discourages interaction with the natural world.

Web ref. <https://www.linnean.org/meetings-and-events/events/taxsyst-plenary-2018>

First State of the World's Fungi meeting held at Kew

The release of a report on the State of the World's Fungi precipitated the first ever State of the World's Fungi meeting at Kew on 13–14 September. Scientists and policy-makers met to discuss issues raised within the report. Pam Catcheside (AD) attended and has offered to provide us with her thoughts on the meeting in the next issue of the Newsletter. In the meantime you can download your own copy of the report, which has a similar format to the 2017 State of the World's Plants, from Web ref. 2. You can also listen to the audio of an interview of Tom May about the report by Phillip Adams on ABC Late Night Live (Web ref. 3).

Web references

- 1: <https://www.kew.org/science/news/kew-hosts-first-ever-state-of-the-world%E2%80%99s-fungi-symposium>
- 2: <https://stateoftheworldsfungi.org/>
- 3: <http://www.abc.net.au/radionational/programs/latenightlive/state-of-the-worlds-fungi/10263526>

Plants miss out at Illegal Wildlife Trade Conference

Another example of Plant Blindness (see p. 6) was highlighted by the International Union for Conservation of Nature (IUCN) (Web ref. 1) before an international meeting on the Illegal Wildlife Trade took place in London in early October (Web ref. 1). Government officials from around the world met ...

to develop action plans to combat the illegal trade of pangolin scales, elephant ivory, and rhino horn. But some of the world's most heavily trafficked wildlife –

plants – won't be discussed. This is despite calls from across the conservation field, including IUCN, to give plants a voice.

Web references

- 1: <https://www.iucn.org/news/species/201810/illegal-wildlife-trade-endangers-plants-few-are-listening>
- 2: <http://www.illegalwildlifetrade.net/iwt18event/>

Gone Mallee

Want to learn more about the mallee area of Australia – or in this case the mallee area of Victoria and South Australia. Mike Ladd took 18 months to make the four episodes which compose this series broadcast on *The History Listens* and also the *Off Track* programmes on ABC Radio National. The first episode considers what attributes define the mallee, the second the people of the mallee, the third a year in the life of the tiny mallee township of Mantung and the fourth the ecology of the Australian mallee. Martin O'Leary (AD) features in the fourth episode.

Web ref. <https://www.abc.net.au/radionational/programs/offtrack/mallee/9931344>

Contrasting thoughts of scientific communicators on their subject

Science blogger Jenny Rohn's final piece for *The Guardian's* Occam's Corner (Web ref. 1) was rather dispiriting as she questioned what was able to be achieved with the pen in today's climate.

When does any of our evidence, no matter how carefully and widely presented, actually sway the opinion of someone whose viewpoint has been long since been seduced by the propagandists?

Fellow blogger Fiona Fox's gave a much more upbeat response to this piece (Web ref. 2), encouraging all scientists to persist in providing scientific evidence to such debate – its absence would make things far worse than they are.

It is sad to see that *The Guardian's* Science blog which had been operating for eight years closed at the end of August (Web ref. 3).

Web references

- 1: <https://www.theguardian.com/science/occams-corner/2018/aug/29/science-communication-fake-news>
- 2: <https://www.theguardian.com/science/blog/2018/sep/03/scientists-must-keep-fighting-fake-news-not-retreat-to-their-ivory-towers>
- 3: <https://www.theguardian.com/science/head-quarters/2018/aug/31/farewell-to-the-guardians-science-blog-network>

Websites of interest

Brain pickings

An enlightening article on Rachel Carson and the battles she fought to produce her classic *Silent Spring* in 1962 was what first drew me to this site and I recommend the item to you since it is so reminiscent of what is happening around us today. The next item to catch my eye was an account of Werner's *Nomenclature of Colours: Adapted to Zoology, Botany, Chemistry, Mineralogy, Anatomy, and the Arts*. A facsimile of this 1814 book was published earlier this year (see p. 33) and here is a marvellous background to the original.

Web ref.: <https://www.brainpickings.org/about/>

Australia's Science Channel

Australia's Science Channel is operated and was developed by The Royal Institution of Australia Inc., an independent charity and unique national science hub promoting public awareness and understanding of science. It was founded in 2009 and is the sister organisation of the prestigious Royal Institution of Great Britain. The best way

to achieve the mission of The Royal Institution of Australia was to build Australia's Science Channel. [From their website]

It seems that plants are presently not high on their agenda. In fact under the heading Our Planet, one of nine sub-channels, the subheadings are climate science, natural world, animals, paleontology and geology. Perhaps the botanical community needs to try and change this.

Web ref. <https://australiascience.tv/about-us/>

Beating around the Bush

On the other hand check out the relatively new *Beating around the Bush*, profiling the wonderful, winsome and weird plants of Australia. Learn what it's like to be stung by a stinging tree, about Bunya trees, the mysterious *Pilosyles*, leek orchids, grass trees and *Idiospermum*, to name just some of the plants which have been covered since its inception.

Web ref. <https://theconversation.com/welcome-to-beating-around-the-bush-wherein-we-yell-about-plants-96993>

Points of view

Scientific publishing monopoly to end?

George Monbiot's article (Web ref. 1) "Honourable theft" is a summary of the baddies (big academic publishers) and the goodies (Sci-hub) with respect to scientific pay walls. But is the monopoly about to end?

Last week, a consortium of European funders, including major research agencies in the UK, France, the Netherlands and Italy, published their "Plan S" [Web ref. 2]. It insists that from 2020 research we have already paid for through our taxes will no longer be locked up. Any researcher receiving money from these funders must publish her or his work only in open access journals.

Until it does Monbiot indicates that "the ethical choice is to read the stolen material published by Sci-hub".

Web references

1: <https://www.monbiot.com/2018/09/17/honourable-theft/>

2: https://www.scienceeurope.org/wp-content/uploads/2018/09/Plan_S.pdf

End of a journal?

Sad to see that the journal *reCollections* produced by the National Museum Australia and mentioned in an earlier *ASBS Newsletter* (Number 171, p. 36) as a journal of interest to our members has not produced any issues since 2016. It has been under review since October 2016 which presumably means there is no funding and the journal itself is no more. Hopefully another outlet and perhaps a different form can be found for disseminating the sort of information produced in the existing issues of the journal.

The twenty most charismatic species

Bearing in mind the article on Plant Blindness elsewhere in this Newsletter I was interested to see whether any plants got a mention in the paper with this title.

Charisma is a term commonly used in conservation biology to describe species. However, as the term "charismatic species" has never been properly defined, it needs to

be better characterized to fully meet its potential in conservation biology. To provide a more complete depiction, we collected information from four different sources to define the species currently considered to be the most charismatic and to understand what they represent to the Western public.

Clearly the title of the paper needed to be different since it appears that only animals were considered; ergo, only animals are charismatic. But even here the list was dominated by large mammals, 15 of the 17 with four legs, and many of them from Africa, while the other three places went to the koala, the crocodile and the great white shark. Is community knowledge of the animal kingdom so poor that even birds didn't rate a mention!

Reference

Albert C., Luque G.M. & Courchamp F. (2018). The twenty most charismatic species. *PLoS ONE* 13(7): e0199149. <https://doi.org/10.1371/journal.pone.0199149>

Case for introducing rhinos to Australia

Don't just read the headline on this one

Web ref. <http://theconversation.com/the-case-for-introducing-rhinos-to-australia-99585>

Minimising taxonomic change?

Recently Leon Perrie posted the following on ASBS FaceBook

I'm curious to what extent people think it is useful to minimise taxonomic change. In my own taxonomic practice I've been strongly influenced by Entwisle & Weston 2005..., who listed "minimise taxonomic change" as their second guideline, after monophyly.

Asking from across the Tasman, how strong is the desire for taxonomic stability in Australia today? Does anyone know what role, if any, it plays in the Australian Plant Census process?¹

In a blog associated with this topic (Web ref.), using ferns as examples, Leon asked the same question of the public. Anyone looking at the wholesale changes associated with plant names in the past 20 years would probably find the use of the phrases "minimising taxonomic change" and "taxonomic stability" rather ironic.

References

Entwisle T.J. & Weston P.H. (2005). Majority rules, when systematists disagree. *Australian Systematic Botany* 18: 1–6. <https://doi.org/10.1071/SB04013>

Web ref. <https://blog.tepapa.govt.nz/2018/08/31/why-do-scientific-names-change-kiokio-by-any-other-name/>

¹ The recent merging of *Hakea* and *Grevillea* by Christenhusz, Fay & Byng in 2018 (www.plantgateway.com/globalflora/) is one dramatic example of a lack of concern for the resulting plethora of name changes. I've been involved in two global works – on Phrymaceae (*Phytoneuron* 2012–39: 1–60) and Linderniaceae (*Austral. Syst. Bot.* 2018 31: 241–251) – that made changes in generic circumscription. Minimising name changes in determining a new global generic taxonomy was a high priority after establishing monophyly. A further factor however, in these small, recently segregated families of the old Scrophulariaceae, was to avoid the option of a single genus encompassing the bulk of the family. To address this we sought a taxonomy that also optimised the combined phyletic informativeness of names at these two prime levels in the taxonomic hierarchy.

WRB

Items of interest

A demise of Antarctica's 'moss forests'?

The moss vegetation in the Windmill Islands of East Antarctica is changing due to the drying of the climate. The original letter communicating this information was written by Robinson et al. (2018) and published in *Nature Climate Change* but is not freely available. You can read more about it on the other sites (Web refs. 1–3), including the article in *The Conversation* by some of the same authors.

References

Sharon A. Robinson, Diana H. King, Jessica Bramley-Alves, Melinda J. Waterman, Michael B. Ashcroft, Jane Wasley, Johanna D. Turnbull, Rebecca E. Miller, Ellen Ryan-Colton, Taylor Benny, Kathryn

Mullany, Laurence J. Clarke, Linda A. Barry & Quan Hua (2018). Rapid change in East Antarctic terrestrial vegetation in response to regional drying. *Nature Climate Change* 8: 879–884. <https://www.nature.com/articles/s41558-018-0280-0>

Web ref. 1: <https://theconversation.com/antarctic-moss-forests-are-drying-and-dying-103751>

Web ref. 2: <https://www.bbc.com/news/science-environment-45629395>

Web ref. 3: <https://dailygalaxy.com/2018/09/our-sentinel-for-the-whole-ecosystem-climate-change-is-killing-ancient-antarctica-moss-beds/>

Seagrass recovery

While seagrass beds are being destroyed at a great

rate globally here are three tales of their recovery, two in America and one in Australia.

Reference

<https://blog.nature.org/science/2018/10/01/recovery-prairies-under-the-sea/>

Great green balls of algae

Lake balls, moss balls and marimo are just some of the ways these green balls are referred to and if you have an aquarium you may well be familiar with them already. The green balls are an aggregate of a filamentous green algae, *Aegagropila linnaei* Kützinger, and mostly they occur naturally in the cold water lakes of previously glaciated lakes in Europe, where they are an endangered species, as well as in Japan, where the balls are protected and have a particular status as a “special natural monument” or national treasure (Boedeker et al 2010). One of the attractive aspects of this organism is its movement up and down, buoyancy being conferred by bubbles from photosynthesis. For further information and pictures of this threatened organism consult the references below. Could they be an ideal pet?

References

Boedeker, C., Eggert, A., Immers, A & Smets, E. (March 2010). Global Decline of and Threats to *Aegagropila linnaei*, with Special Reference to the Lake Ball Habit. *BioScience* 60(3): 187-198. <https://doi.org/10.1525/bio.2010.60.3.5>

Cano-Ramirez, D.L., de Fraine, T.S., Griffiths. O.G. & Dodd, A.N. Photosynthesis and circadian rhythms regulate the buoyancy of marimo lake balls. *Current Biology* 28(16), PR869–R870. DOI: <https://doi.org/10.1016/j.cub.2018.07.027>

Web ref.: <https://www.nytimes.com/2018/08/24/science/marimo-floating-algae-balls.html>

Mangrove conservation headaches

It has recently been discovered that one of two critically endangered mangroves recognised by the IUCN, *Bruguiera bainesii*, is a hybrid (Ono et al. 2016); hybrids are not given conservation status by the IUCN. This has precipitated a call by participants in the 3rd International Workshop for Conservation Genetics of Mangroves for a clarification of species identity so that efforts can be directed towards priority species and in order that reforestation is with appropriate material. The need for molecular techniques for such clarification is likely since the genus most used for reforestation purposes, *Rhizophora*, is also known to hybridize naturally and such hybrids are often morphologically indistinguishable from

the parents.

References

Alison K.S. Wee, Gustavo M. Mori and 13 others. The integration and application of genomic information in mangrove conservation. *Conservation Biology* 23 May 2018. <https://doi.org/10.1111/cobi.13140>

Ono J, Yong JW, Takayama K, Saleh MNB, Wee AK, Asakawa T, Yllano OB, SG Salmo III, Suleiman M, Tung NX. (2016). *Bruguiera hainesii*, a critically endangered mangrove species, is a hybrid between *B. cylindrica* and *B. gymnorhiza* (Rhizophoraceae). *Conservation Genetics* 17: 1137–1144. <https://doi.org/10.1007/s10592-016-0849-y>

How did the baobs get to Australia?

Your ABC cents are working for you in the Kimberley. Following on from a successful *Curious Canberra* project, ABC Kimberley has been running *Curious Kimberley* since November 2017. One of the questions asked by the public relates to those wonderful baobs of the region and their relatives in Africa and Madagascar, usually referred to as baobabs. Here are two competing theories for how they got to Australia.

Web ref. www.abc.net.au/news/2018-08-07/baobs-come-africa-baobabs-evolution/10060946

Old African baobabs dying

African baobabs can live for up to 2500 years but the older ones are dying (Web ref. 1 & 2). Trees which have been in the landscape for this long often have names and Homasi, Panke, Platland and Chapman (Web ref. 3) are no more, while Dorslandboom and Glencoe are not well. Indeed it has been documented that some 70% of these older trees have died in the past 12 years. Increased temperatures and drought are thought to be the cause.

Web references

- 1: <https://www.theatlantic.com/science/archive/2018/06/baobab-trees-dying-climate-change/562499/>
- 2: <https://www.forbes.com/sites/grrlscientist/2018/06/17/africas-oldest-baobab-trees-are-probably-the-victims-of-climate-change/#2d95cb7f25f4>
- 3: <https://africageographic.com/blog/chapmans-baobab-one-of-africas-largest-trees-falls/>

Losing Earth: the decade we almost stopped climate change

A special report in the *New York Times* on August 1st by Nathaniel Rich following 18 months research accompanied by the photographs and

videos of George Steinmetz.

Nearly everything we understand about global warming was understood in 1979.

In the decade that ran from 1979 to 1989, we had an excellent opportunity to solve the climate crisis. The world's major powers came within several signatures of endorsing a binding, global framework to reduce carbon emissions — far closer than we've come since. During those years, the conditions for success could not have been more favorable. The obstacles we blame for our current inaction had yet to emerge. Almost nothing stood in our way — nothing except ourselves."

So what happened?

Web ref. <https://www.nytimes.com/interactive/2018/08/01/magazine/climate-change-losing-earth.html>

Herbarium specimens helping to understand changes associated with urbanisation

The Academy of Natural Sciences of Drexel University in Philadelphia has the oldest herbarium (PH) in North America. The herbarium has an estimated one and a half million plant specimens in its collection, many of them collected from the East Coast of America and many of them now available on-line (Web ref. 1). Specimens from this project are feeding into a bigger project known as the Mid-Atlantic Megalopolis, or MAM for short. Here more than 13 herbaria in the urban corridor from New York City to Washington, D.C. are digitizing some one million herbarium specimens collected in the area.

...this area and its flora present a unique opportunity for the study of urbanization, particularly given its rich herbarium collections, containing specimens collected over the last 400 years. The data mobilized in this effort will help us achieve a better scientific understanding of living urban systems, a critical need for urban planners, restoration ecologists, environmental engineers, (landscape) architects, and conservationists engaged in creating more sustainable and better designed cities, including the constructed and restored natural environments of our urban areas (Web ref. 2).

Web references

1: <https://www.npr.org/2018/09/02/641310268/>

centuries-old-plant-collection-now-online-a-treasure-trove-for-researchers

2: <https://www.mamdigitization.org/>

Herbarium specimens used to study herbivory changes with time

The prime finding from this study using herbarium specimens was that insect damage has increased over time and you can read more about it either through the original paper (Meineke et al 2018) or the popular account in *Science Daily* (Web ref.). Of more interest was this recognition by the author of the value of herbarium specimens used:

While the study serves to illustrate one of the less understood aspects of climate change, Meineke said it also highlights the value of herbarium collections in answering such questions. She said.

It's hard to quantify the value of these collections, because in fact they're invaluable. You can't go back and collect them again, and now these specimens have a renewed value because they can help us understand issues like climate change, invasive species, land use change, and pollution.

There are debates taking place right now about whether to get rid of physical museum specimens now that many of them are digitized," she added. "But we can't because we don't know what sort of DNA technology or RNA technology might be available in the future to take advantage of these specimens. Even though they're imperfect and non-randomly sampled, they're the only records we have. [Web ref.]

References

Meineke, E.K., Classen, A.T., Sanders, N.J. & Davies T.J. (2018). Herbarium specimens reveal increasing herbivory over the past century. *J Ecol.* 2018;00:1–13. <https://doi.org/10.1111/1365-2745.13057>

Web ref.: <https://www.sciencedaily.com/releases/2018/09/180904114702.htm>

“Herbaria are data gold mines”

We all agree with this statement, although the word “mine” could reflect the lack of respect shown by some users for the investment by herbaria in their data. It's a pity that some of the gold is not finding its way to support the herbaria and those who work in them so that they can be maintained for the future. Katelin D. Pearson, previously curator of the Robert K. Godfrey Herbarium at Florida State University, is the interviewee in a

podcast on this subject (Web ref.). Her paper on extracting information on associated taxa records from digitised herbarium specimens has been published recently (Pearson 2018).

References

Pearson, K.D. (2018). Rapid enhancement of biodiversity occurrence records using unconventional specimen data. *Biodiversity and Conservation* 27(11): 3007–3018.

Web ref. www.indefenseofplants.com/podcast/2018/7/15/ep-169-herbaria-are-data-gold-mines

Myrtle rust

The Plant Biosecurity CRC has completed a comprehensive review of the environmental impacts of myrtle rust in Australia (Web ref. 1) and the findings have been used to develop a draft Action Plan (Web ref. 2) now open for public consultation.

Web references

1: Makinson R.O. (2018) Myrtle Rust reviewed: the impacts of the invasive pathogen *Austropuccinia psidii* on the Australian environment. Plant Biosecurity Cooperative Research Centre, Canberra. www.apbsf.org.au/Documents/Myrtle%20Rust%20reviewed%20June%2022%202018%20web.pdf

2: Makinson R.O. (2018) Myrtle Rust in Australia – a draft Action Plan, presented at the Plant Biosecurity Cooperative Research Centre's National Science Exchange, Melbourne, 31 May 2018. www.apbsf.org.au/wp-content/uploads/2018/06/Myrtle-rust-action-plan_accessible.pdf

“New guidelines for biological survey and mapped data (revised 16th August 2018)”

The Department of the Environment and Energy (the Department) collates, maintains and uses point-based fauna and flora survey and mapped data to support decision making on referral applications, assessments and approvals under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), and to assist in the protection and recovery of species and communities. Such data are drawn from a wide range of sources, including from data holdings generated through the implementation of the EPBC Act and from monitoring activities under Natural Resource Management programs. Historically, the quality of such data has varied considerably and this directly affects

the rigour and reliability of information products generated from them. This document seeks to improve on this by outlining data and information requirements for biological survey and mapped data. This includes species data, including threatened species, migratory species, listed marine species, cetaceans and invasive species. [Introduction to document]

Source: Downloadable, together with a species observation data template from www.environment.gov.au/about-us/environmental-information-data/information-policy/guidelines-for-biological-survey-mapped-data

Is Australia's EPBC Act effective?

A new report, *Fast tracking extinction: Australia's national environmental law*, has been prepared by the Australian Conservation Foundation, World Wildlife Fund, the Wilderness Society and the University of Queensland. It advocates a “need for urgent interventions to genuinely protect threatened species”, primarily from loss of habitat, and points to the need for a new generation of environmental laws to prevent further extinctions in a country where we lead the world in the number of mammals which have become extinct since the arrival of Europeans.

Web ref. https://d3n8a8pro7vhm.cloudfront.net/auscon/pages/6451/attachments/original/1536271571/08-2018_16pp_ACF_Fast-Tracking_Extinction_report_final_WEB.PDF?1536271571

Ray Cranfield and lichens

The Western Australian Herbarium FaceBook page pointed to this 2013 item on now retired botanist Ray Cranfield.

Web ref. www.abc.net.au/local/photos/2013/11/08/3887218.htm

Defining a genetically modified crop

Differing definitions of genetically modified crops in America and Europe are causing confusion.

Web ref. <https://www.nytimes.com/2018/07/27/science/gmo-europe-crops.html>

Authenticating Australian honey using pollen analysis

For those of you concerned about the origin of the honey you eat the pollen analysis of Australian honey produced from *Eucalyptus* is shown to be different from *Eucalyptus* honeys produced outside Australia.

References

Sniderman, J.M.K., Matley, K.A., Haberle, S.G., & Cantrill, D.J. (2018). Pollen analysis of Australian honey. *Plos One* <https://doi.org/10.1371/journal.pone.0197545>

Web ref.: <https://theconversation.com/unique-pollen-signatures-in-australian-honey-could-help-tackle-a-counterfeit-industry-97859>

Bees, extinction and land clearance: getting your facts right.

Which of these facts is correct according to the RMIT/ABC Fact Check?

- Two-thirds of Australia's food production is reliant on bee pollination
- Australia has one of the highest loss of species anywhere in the world.
- Queensland is clearing land as fast as Brazil.

These are just a few of the statements relating to the environment which are covered in Fact check. Topics are covered under five broad categories: economy, immigration, health, environment and education.

Web ref. www.abc.net.au/news/factcheck/

Fire

There was a really informative podcast on the topic of fire, now and into the future on ABC's *Rear Vision* this week.

Rising temperatures and prolonged heat waves combined with dry environments seem to be leading to longer fire seasons and bigger, hotter, faster fires. What's the cause and how should we respond?

Comparisons are made between the American and Australian situation and it is clear that attitudes with respect to fire control are changing in both countries.

Web ref. www.abc.net.au/radionational/programs/rearvision/fire/10359506

A cause for concern?

An article below plots the rise and rise of the callery pear (*Pyrus calleryana*) to its status today as a major invasive in Maryland, USA. Climatic conditions in Maryland are somewhat different to those in most of Australia and New Zealand but given the increased popularity of ornamental pears in both countries in the last few years, many of them cultivars of *P. calleryana* and even including "Bradford", the cultivar referred to in the article, it has to be asked whether anyone has researched whether these beautiful trees are appropriate for our conditions.

Web ref. https://www.washingtonpost.com/lifestyle/magazine/how-we-turned-the-bradford-pear-into-a-monster/2018/09/14/f29c8f68-91b6-11e8-b769-e3fff17f0689_story.html?noredirect=on&utm_term=.19a0ff5104f9

Refereeing advice

Ever received a paper for refereeing but the English was not of publication standard. Did you assume that the author's first language was not English? On what grounds did you make this assumption and what advice did you give? Here is what you should and shouldn't do in such circumstances (Web ref. 1) together with an excellent downloadable guide to best practice refereeing from the British Ecological Society (Web ref. 2) pointed to on the same blog site. Further advice on producing a thorough review can be seen at Web ref. 3.

Web references

- 1: <https://smallpondscience.com/2018/08/06/lets-stop-saying-native-english-speaker-in-reviews/>
- 2: https://www.britishecologicalsociety.org/wp-content/uploads/Publ_Peer-Review-Booklet.pdf
- 3: <https://www.nature.com/articles/d41586-018-06991-0>

The Wardian Case

Luke Keogh, visiting scholar at Deakin University and the 2017 recipient of the Redmond Barry Fellowship for study in the collections of the University of Melbourne and State Library of Victoria, has a passion for the Wardian case and its influences. You can read some of his work on the subject in the references below or wait for his book which will be published next year by the University of Chicago Press.

References

Keogh, L. (2017). The Wardian Case: how a simple box moved the plant kingdom. *Arnoldia* 74/4: 1–13. <http://arnoldia.arboretum.harvard.edu/pdf/articles/2017-74-4-the-wardian-case-how-a-simple-box-moved-the-plant-kingdom.pdf>

Keogh, L. (2018). The Wardian Case: environmental histories of a box for moving plants. *Journal of Environment and History* (paid preprint). https://www.ingentaconnect.com/content/whp/eh/pre-prints/content-whp_1229

Web ref.: <https://theconversation.com/how-the-wardian-case-revolutionised-the-plant-trade-and-australian-gardens-100448>

Pollination ecology review

Twenty years ago articles [on pollination ecology] most often dealt with pair-wise interactions between plants and pollinators...whereas currently

interactions are commonly viewed at the community level as a network. In earlier years (1998–2000), 40% of the articles mention population, 19% community and 1% ecosystem services. In contrast, in more recent years (2015–2017), 35% of articles mention population, 33% community and 11% ecosystem services. [From the Introduction to Knight et al., 2018]

There have been large changes in the field of pollination ecology in the last 20 years and these changes are the subject of this review together with predictions for future studies and needs.

A great summary, covering topics such as the declining numbers of pollinators, plant pollination at the community rather than the taxonomic level and anthropogenic changes such as increasing urbanisation and agriculture intensification and their effects on plant pollination.

Reference

Knight, T.M., Ashman, T.-L., Bennett, J.M., Burns, J.H., Passonneau, S. & Steets, J.A. (2018). Reflections on, and visions for, the changing field of pollination ecology. *Ecology Letters* 21: 1282–1295. <https://doi.org/10.1111/ele.13094>

ASBS conference update

The 2018 ASBS conference is getting closer! Have you registered? If not, why not, it's easy to do on-line (Web ref. 1). If you have, fantastic, we can't wait to see you. Below is some handy information for those of you who haven't been to the Queensland Herbarium before or for a while.

The Queensland Herbarium is based in the Brisbane Botanic Gardens Mt Coot-tha, which is on Mt Coot-tha Rd in Toowong, Qld 4066. The nearest accommodation is about 2 km away, which is a nice walk before or after sitting down all day (although not so lovely if it's humid or raining). There are many other options in neighbouring suburbs of Auchenflower and Milton, although you will need to catch a bus, uber/taxi or drive from there. There is ample parking at the Brisbane Botanic Gardens Mt Coot-tha and there are several buses that come right into the gardens carpark (Bus numbers 471, 598 and 599; see Web ref. 2 for timetables and journey planners). Use this planner also if you are going to attend the workshop on the Monday. The workshop is being held at the State Library Queensland on South Bank. South Bank is easily accessible from Toowong on the citycat (ferry) or bus. If you felt like a ride you could even use the share bikes of Brisbane (Web ref. 3). Unfortunately, we don't have a bike station at the gardens yet.

The map (attached) shows the location of the herbarium in relation to the CBD and some areas nearby where there are restaurants and shops. This is in no way an exhaustive list of shops/restaurants in the area but these are the main centres close to where you may be staying. In Toowong, near or above the station is Toowong Village Shopping Centre (Web ref. 4), which has

supermarkets, food court, newsagents, fashion stores and restaurants.

Closest accommodation options

- Toowong Central Motel Apartments www.toowongcentral.com, 38 Jephson St (cnr. Lissner St.) Toowong, Qld. From \$116 – Free onsite parking, complimentary breakfast, free wifi, kitchenette, self-contained
- Toowong Inn & Suites (formerly Comfort Inn & Suites) www.toowonginn.com.au/, 24 Lissner St, Toowong Qld. From \$131 – Free onsite parking, free wifi, breakfast available
- Toowong Villas www.toowongvillas.com.au/, 9 Ascog Terrace, Toowong Qld. From \$130 – free onsite parking, self-contained apartment with kitchen (1, 2 or 3 bedroom), free wifi
- Jephson Hotel www.jephsonhotel.com.au/, 63 Jephson Street (Cnr Sherwood Road), Toowong, Qld. From \$149 – studio and apartments, free onsite parking, free wifi, breakfast available.
- Benson Court Motel www.bensoncourt.com.au, 61 Benson St, Toowong, Qld. From \$150 – free onsite parking, kitchenette, self-contained

Transport from the airport

Information regarding travelling to and from Brisbane Airport can be found at www.bne.com.au/passenger-information. The AirTrain is easy to use and will get you straight to Toowong Station with only one change.

Field trip and workshop

As of early October, the field trip is full and there are only four spots left in the workshop.

Visiting the Queensland Herbarium collection

The herbarium will be open the weekend before and during the conference between 9am and 5pm by appointment. To make an appointment to access the Queensland Herbarium, please contact Queensland.Herbarium@qld.gov.au before you



Fig. Location of Queensland Herbarium and nearest shops and restaurants

arrive in Brisbane so we can facilitate your visit.

Note: You will not be able to bring paper products into the collections without them going through our freezer for 7 days. We can provide det/conf/annotation slips and scrap paper to make notes on but if you really want to use your own you can post them to us for freezing. All items for freezing must be received at the Queensland Herbarium

by Thursday 22nd of November.

Web references

1. <https://systematics.ourplants.org/registration/>
2. <https://translink.com.au/>
3. www.citycycle.com.au/All-Stations/Station-Map
4. www.toowongvillage.com.au/

Gil Brown
Organising Committee

Meeting and workshop reports

Australasian Herbarium collections managers attend Dunedin conference

The photo (Fig.) shows members of the Managers of Australasian Herbarium Collections (MAHC) who attended the combined Society of the Preservation of Natural History collections (SPNCH) and Biodiversity Information Standards (TDWG) conference in Dunedin at the end of August (Web ref. 1). This was the first time that these two societies had met together and the first time that the annual SPNCH meeting had been held in the southern hemisphere.

The title of the meeting “Collections and Data in an Unstable World” reflected current events as well as efforts by museum professionals to find ways to combat the various waves of instability, ranging from the environment to politics, which affect not only the collections, but also day-to-day practices. The full conference book with abstracts

can be downloaded at Web ref. 2.

MAHC members presented six 20 minute talks and four posters at the conference on various topics ranging from Earthquake mitigation solutions, relocating herbaria, digitisation initiatives, lessons from a biodiversity disaster and management of a wet collection.

Thanks to Antony Kusabs and other MAHC members who provided information and the Allan Herbarium FaceBook page for alerting us to this meeting.

Web references

- 1: <http://spnhc-tdwg2018.nz/conference/>
- 2: <http://spnhc-tdwg2018.nz/assets/Uploads/SPNHC-+-TDWG-Programme-book-A4.pdf>

Robyn Barker



Fig. Left to right: Antony Kusabs (WELT - MAHC Chair), Mary Korver (CHR), Dhahara Ranatunga (AK), Sarah Hirst (DNA), Karen Marais (MQU), Frank Hemmings (UNSW), Bronwyn Collins (CANB), Sue Gibb (CHR), Peter Jobson (NT), Lyn Cave (HO), Adrienne Stanton (PDD), Pina Milne (MEL); missing from MAHC attendees is Shelley James (NSW - Assistant MAHC Chair).
Ph. Bronwyn Collins

Systematics workshop reveals diverse assemblage of budding systematists

Tim Collins

PhD candidate at the University of New England

The 5th National Postgraduate Training Workshop in Systematics was held in July this year at The University of Adelaide, giving 28 PhD, Masters and Honours students from 11 universities across Australia and New Zealand hands-on training using a variety of systematic analyses. Financial and in-kind support from Australian Centre for Evolutionary Biology & Biodiversity (The University of Adelaide), Environment Institute (The University of Adelaide), Society of Australian Systematic Biologists, Australasian Systematic Botany Society and Australian Biological Resources Study, meant that there were no registration fees and thus generously covered lunches, tea breaks and other workshop costs.

The workshop program included introductory seminars on phylogenetics and data handling through to practical exercises applying phylogenetic analyses to real-world data. Methods of DNA sequence data handling and analysis included alignment using Geneious, basic tree production using RAxML, and time-measured phylogenies using BEAST. These introductory seminars focused on protein-coding nuclear

DNA sequences, in particular COI sequences, but later seminars covered species delimitation and phylogenetics using Next Generation Sequence data.

The budding systematists were privy to behind the scenes tours of the SA Museum and State Herbarium demonstrating a variety of ways that museum specimens are stored, and the specific challenges in maintaining specimen databases for the different collections.

Dr Mark Harvey was engaging and witty in his seminars covering the different approaches of zoological and botanical nomenclature to large and diverse groups, and the processes (and fun) involved in describing and publishing new species.

The short seminars on funding, collaboration and employment were interesting and well-worth their inclusion as they helped provide a complete picture of the challenges facing taxonomists in Australia today.

Overall, I think I gained a lot more confidence in understanding the application of a variety of phylogenetic analyses. The timing of the workshop was particularly good for me, as I



Fig. Participants in the 5th National Postgraduate Training Workshop in Systematics held at Adelaide University in July, 2018. Left to right (*en bloc*) are: Hilary Pearl, Andrew Hosie, Tim Collins, Jeremy Wilson, Kevin Maurin, Sally Lau, Kristen Fernandes, Elle Fox, Siobhan Egan, Raees Khan, Paige Maroni, Ruth Palsson, Nicole Foster, Matthew Ford, Madalene Giannotta, James Dorey, Francis Nge, Chris Ward, Brock Hedges, Ehsan Sanaei, Jacob van Zoelen, John McDonald, Marc Freestone; missing: Alana Delaine, Matilda Brown, Helen Kennedy, Isaac Kerr, James Nankivell, Bernardo J O'Connor.

Ph. Dr Michelle Guzik

am preparing to sequence samples, and will be able to approach the data analysis with some experience of the software, and the challenges of manipulating the large data sets.

I also enjoyed meeting the other students and learning about the broad variety of systematics projects underway around Australia. The welcome

dinner, a mid-week BBQ and the spontaneous Schnithouse dinner were wonderful opportunities to get to know each other and have fun.

The venue was excellent, food was good, and Andy Austin and his team made me feel very welcome. I would definitely recommend future workshops to other systematics students.

Coming conferences

12th Australasian Plant Conservation Conference, Canberra: 11–15 November 2018

To coincide with the release of the third edition of the ANPC's Threatened Plant Translocation Guidelines, APCC12 will bring conservation researchers and practitioners together to discuss the recent advances and latest scientific findings in plant translocation across Australia for successful threatened plant translocations. Species translocations have been an important conservation approach for more than two decades across Australia to save threatened species from extinction. With no foreseeable reduction in threats from climate change, urban and agricultural expansion and intensification, and invasive pests and diseases, translocations will be increasingly important into the future. Registrations close Friday 26 October 2018

Details: www.anpc.asn.au/conferences/2018

Taming the BEAST Down Under Sydney: 17–22 February 2019

Taming the BEAST Down Under will be a one-week workshop, organized by the Molecular Ecology, Evolution, and Phylogenetics group at the University of Sydney. The workshop consists of invited talks, lectures, and hands-on tutorial sessions given by core BEAST2 developers and experts in phylogenetics. The aim of the summer school is to provide participants with a firm grasp of the theory behind the methods central to phylogenetics, as implemented in BEAST2. It follows the successful Taming the BEAST workshops that have been hosted in Switzerland, New Zealand, and the UK. Registrations close 31 October and numbers are limited.

Details: <https://sydney.edu.au/science/biology/meep/workshops/>

Deaths

Vale Joy Thompson 3 October 1923 – 15 August 2018

In the late 1940s and through the 1950s a team of young botanists in Sydney were actively curating the collections of the National Herbarium of New South Wales (well known as NSW in the herbarium codes). Their old building (now called the Robert Anderson Building) was overcrowded and their specimens unmounted in folders in cardboard boxes. The severe overcrowding prevented improvement in the physical conditions, but they were bringing the classification of the collections into line with current research.

The team (Fig. 2b) included Joy Thompson (né Gardiner-Garden – an extreme case of nominative determinism?) (Fig. 1), Mary Tindale, Neridah Ford and Lawrence (Lawrie) Johnson. They were encouraged by Robert Anderson (Chief Botanist and Curator, Botanic Gardens and National Herbarium), Deputy Knowles Mair and botanical mentor Joyce Vickery. The last survivor of this team, Joy Thompson, died on 15 August 2018, aged 94.

At a time when most girls did not continue to the senior years of high school, Joy did the Leaving Certificate at Brighton College, Manly, and then an Agricultural Science degree at the University of Sydney. This was during the war years and she spent some vacations in the Land Army in farming areas near Maitland (Fig. 2a) or working at a canning factory. When she graduated in 1946 she was appointed to a position at the Herbarium (then in the N.S.W. Department of Agriculture) to write

treatments for the new *Flora of New South Wales* although, as she herself noted in a talk in 2003 (see below), in practice she had the same mix of curatorial duties as the other botanical staff and worked on the Flora in her 'spare' time.

She took on the role of Honorary Secretary of the Systematic Botany Committee of ANZAAS 1952–1954, and edited its newsletter, *Australasian Herbarium News*, with Joyce Vickery (also on the committee) during that period.



Fig. 1. Joy Garden, January 1952.

Joy married Max Thompson in 1956 and resigned from the Public Service in December 1958, as women had to do in those days when starting a family. She had two children, Judith and Campbell. She returned ten years later to half-time botanical work, which was a rare kind of position in the N.S.W. Public Service. Her work was to prepare Flora treatments and sort out problem genera for those. After she retired in 1982 she became an Honorary Research Associate and continued botanical projects for many years. After Joy and Max moved to Mittagong in the Southern Highlands about 130 km south of Sydney, visiting the

Herbarium required a 2.5 hour train trip, but Joy still made that trip once a week, finally stopping her work in 2009. After Max's death and a fall she was cared for in a nursing home but her mind and memory remained clear. She immediately recognised any botanical colleague who visited, even if she had not seen them for many years, and was always interested in any scientific items read



Fig. 2. **a** (top), Joy Garden (fourth from left) in the Land Army near Maitland, 1943.

b (left), Botanical and senior staff of the Botanic Gardens Sydney, in about September 1948. Back, from the left: 1 Robert H. Anderson (Chief Botanist and Curator), 2 Joy Garden (later Thompson), 3 Mary D. Tindale, 11 the Rev. H.M.R. Rupp (Honorary Curator of orchids), 13 Neridah C. Ford, 15 Lawrence A.S. Johnson. Front: 1 Ernest F. Constable (Botanical Collector). [Absent Knowles Mair and Joyce W. Vickery]. Others are horticultural and office staff.

to her by her daughter in her last years.

During the 1940s and 1950s the major activities of all the botanical staff, apart from specimen identification for the public and for other researchers, were scientific curation of the

collection and preparing a semi-monographic flora of New South Wales. This was published with the cumbersome title of Contributions from the New South Wales National Herbarium, Flora Series. Joy was responsible for the conifers, many small, mostly aquatic, monocot families,

Polygalaceae, Tremandraceae and, with Alma Lee, the pea-flowered Fabaceae.

At that time, describing individual new species was regarded much less favourably than revising whole genera, so specimens of many new species were noted as distinct in the collection but remained unpublished. Major studies were her revisions of *Callitris*, *Leptospermum*, *Swainsona*, and *Tetratheca*.

Without funds allocated for fieldwork or vehicles provided, Joy and the other botanists collected specimens during family holidays and bushwalks. Joy and Max had met through bushwalking with Lawrie Johnson (Max and Lawrie had both attended Parramatta Boys High). Later, Joy and family made summer trips to the Snowy Mountains for three decades, perhaps prompted by her visits there with Joyce Vickery and other botanists in the mid 1950s. This led to a keen interest in alpine and subalpine plants (Fig. 3), resulting in many herbarium specimens collected from 1965 to 1994 and the publication with Max Gray (CANB) of a checklist of subalpine and alpine species found in the Kosciuszko region. They travelled widely in other parts of Australia, with Joy's thousands of specimens in NSW attesting to this. Notably, her husband's auditing work took him to Brewarrina in spring for about 14 years and Joy put these visits to good use, collecting many specimens from this part of northwestern NSW and compiling species lists that are in the Herbarium library.

Joy's early studies were directed to the Flora Series for NSW, but projects of the NSW Herbarium and of Australian botanists changed over the decades. When a much briefer four-volume *Flora of New South Wales* was initiated in 1983, edited by Gwen Harden, Joy wrote the sections on conifers and the genera *Swainsona* and *Leptospermum*. With the

formation of the Australian Biological Resources Study (ABRS) and work towards a Flora of Australia, Joy received several ABRS grants and wrote various treatments, some of which remain unpublished (*Tetratheca*, *Neofabricia* and *Swainsona*).

An even wider range of botanical expertise was called for when Joy was specialist contributor on botany for the first edition of the *Macquarie Dictionary* (1981).

Joy published numerous papers and over 90 names for genera, species and subspecies, mostly in *Swainsona* and other Fabaceae, conifers, *Craspedia* (Fig. 4), *Leptospermum* and *Tetratheca*. Her distinctive and very legible handwriting in notes on the specimens and folders in the herbarium collection show her insights and knowledge. Her *Leptospermum* work earned her an M.Sc. degree in 1987. Among Joy's findings was that Sturt's Desert Pea, the South Australian state floral emblem, was wrongly classified as *Clianthus* and so this notable plant is now *Swainsona formosa* (G.Don) Joy Thomps. Her finding based on morphology has since been confirmed by DNA studies. Species named after Joy reflect her research interests: *Agrostis thompsoniae* S.W.L.Jacobs, *Juncus thompsonianus* L.A.S.Johnson, *Oxalis thompsoniae* B.J.Conn & P.G.Richards, *Pycnosorus thompsonianus* J.Everett & Doust and *Swainsona thompsoniana* R.W.Davis & P.J.H.Hurter.



Fig. 3. Joyce Vickery, Marjorie Wilson, Lilian Fraser and Joy Garden on the summit of The Perisher, Snowy Mountains, in January 1956.

Fig. 4 Joy (centre) with children Judith and Cam, Kosciusko National Park 1974, surrounded by *Craspedia*, a group she published on with Joy Everett.



Most botanists of her generation did their research without the access to types afforded by overseas visits, which were then very difficult and expensive to arrange, but she was

able to visit Europe in 1989–1990. While Max was largely engaged in historical research there, she spent nine months as a visiting botanist at the Kew Herbarium in London, partly funded by a grant from ABRS. She revelled in the opportunity to study the wealth of historical specimens at K, BM and TCD.

As a colleague, Joy was a cheerful person, and always happy to discuss botanical matters. She was of the generation preceding the use of molecular techniques in systematics, but she accepted that these were a valuable source of data, despite her sentimental attachment to the family Tremandraceae shown in her 2003 talk to NSW staff (see below). She was encouraging and helpful to young botanists and research students, as one of us (BGB) found when visiting the Herbarium in the 1950s on her first botanical project on alpine *Ranunculus*, a group Joy had curated and collected.

Joy will be remembered fondly as a good colleague, with a vivacious smile that made you welcome, and as having made a very strong contribution to systematic botany in Australia.

Karen Wilson and Barbara Briggs (NSW)

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Text of a short informal talk by Joy Thompson to NSW Herbarium staff in 2003

I started work here – we were then the Botany Branch of the New South Wales Department of Agriculture – in 1946 after graduating in Agricultural Science at Sydney

University. The fact that I had done very well in Plant Breeding and Genetics was a big help to me because chromosomes were starting to feature in trendy taxonomy – and I found out later that my lecturer Professor Wally Waterhouse had told the boss here, Bob Anderson, that he had a good girl for him.

My appointment was for writing the *Flora of N.S.W.* but I was put on to general work, enquiries, counter questions and overdue curation with the Flora in my spare time. I learned a lot. After eleven years I had to leave when I had my children but I came back soon as a part-timer. This was great because not having administrative duties I could concentrate on research. Most funding during my days has been for Flora writing. This was handicapped (and still is) in Australia by our lack of knowledge of so many groups. Also in those days we were State public servants. We got train travel expenses but there were no government cars, no interstate specimen loans and our interstate travel was at our own expense.

Fortunately, in 1956 I became a kept woman and Max had an old back-packing mate in Melbourne, a client in Brisbane, and did Australian history research a stone's throw from Kew. We also travelled in all our holidays all over the place. It's easy to camp at Kosciusko or Wilpena Pound with two kids and a Holden station wagon.

As I wrote Flora treatments I revised genera. These revisions have been very exciting and have turned up fascinating things. When you are tackling chaos you must publish the new arrangement, but it does no one any good if you do not publish fairly soon and include notes about problem areas remaining. This opens doors for other workers.

I have kept an interest in most of these past research groups. New areas of Australia are being opened up extending the distributions of some of my groups, like *Swainsona*. Closer contact with other countries has disclosed close relationships, especially with high altitude floras.

Chance has played its part. Exploring where my husband's family pioneered in the 1830s south of Mount Pigeon House [the Budawang Range area] I found a happy *Tetratheca* hundreds of kilometres north

of where it was thought to have occurred. Peter Raven spotted a water plant he knew, and I didn't, driving past those lakes near Sydney Airport [in 1970 – it turned out to be the weedy *Ludwigia peruviana*]. A new familiarity with a group can highlight a misfit – like 'Sturt's Desert Pea' not being a *Chianthus*. Overseas herbaria have early Australian collections that make these places taxonomic minefields. The more familiar you are with eastern Australia, especially coastal N.S.W. and N.E. Victoria, the more you can be confronted with problems. Our flora has been exposed to climatic wobbles and species that are distinct over a huge area, growing together with a different flowering time, break down in rare, what I call, 'flying saucer landing places'. Other people here will agree, especially as to the Budawang.

The groups that have figured prominently in my work have been *Leptospermum* and *Swainsona*. This has gone beyond the genera themselves and into their relationship with other genera and plants in other parts of the world. This higher level taxonomy of mine has been successful and in Fabaceae has brought world acceptance. I decided

this year [2003] not to do any more of this stuff, the little time I can spend here being taken up with identification of problem specimens in groups I have done and interesting questions from students who have been put on to problem areas in my groups.

But something extraordinary has happened. Those wretched molecular biologists have decided that my lovely Southern Australian family, Tremandraceae, that I sorted out in 1976, is not only closely related to, but nested in, Elaeocarpaceae, a family scattered around the world's tropics. One of these families is to be found in Volume 7 of the *Flora of Australia*, the other in volume 24. Tremandraceae is now coming up for the *Flora of Australia* so Darren [Crayn] has involved me. He handed me a letter from Mark Coode at Kew. 'Would Joy please fill this in.' There were columns of boxes for the characters of the three Tremandraceae genera. Who could resist this friendly approach (and the use of 'Joy')? So I have done it – but my knowledge of Elaeocarpaceae is almost limited to the 'Blueberry Ash' smiling through the dining room window of my childhood Balgowlah home.

Darrell Nairn Kraehenbuehl 21 Jan 1934 – 2 Aug 2018

It is sad to have to mark the passing of Darrell Kraehenbuehl who was surely known to every biologist in South Australia through his life time association and interest in the flora of the state.

For botanists in South Australia his best known work was probably the *Pre European vegetation of Adelaide; a survey from the Gawler River to Hallett Cove*, a labour of love which was published in 1996 and involved painstaking location and scrutiny of early herbarium collections from the Adelaide region in AD, MEL and NSW along with voluminous correspondence by letter to numerous libraries. Not for him the advantages given to us today by the existence of email, Trove, AVH and digital imaging of herbarium specimens, to name just a few. His introductory History of Botany in the 1986 *Flora of South Australia*, wherein he listed many of the early collectors from this state, was founded on his strong interest in the biographies of early, particularly German, naturalists. And his conservation ideals were reflected in his early

membership of the Field Naturalists' Society of South Australia and foundation membership of the Nature Conservation Society of South Australia.

Peter Lang, who worked with Darrell for many years on the rare and threatened flora of South Australia has penned a short tribute (Web ref. 1), but there will probably be a more detailed account of his work published later. An obituary appeared in *The Advertiser* (Anon. 2018). Bill Barker spoke on aspects of Darrell's botanical life at a celebration on his retirement (Web ref. 2; modified in Barker 2001).

Darrell is remembered with great fondness by all of those whose lives he touched and the botanical community is much poorer for his passing.

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Fig. Darrell Kraehenbuehl. Left, on old red gum near Karkoo on Eyre Peninsula; right, studying a *Crinum* at Murtho Forest Reserve, near Renmark, SA, in 1994. Ph. P.J. Lang,

conservation. *South Australian Naturalist* 75: 14–18.

Web ref. 1: <https://know.ourplants.org/news/darrell-nairn-kraehenbuehl-21-1-1934-2-8-2018/>

Web ref. 2: <https://www.anbg.gov.au/biography/kraehenbuehl-2.html>

Robyn Barker

Clara Marjorie Walpole Andrew (known as Marjorie) 28 Nov 1918 – 11 Oct 2018

Marjorie Andrew, who passed away in her 100th year, was not a botanist but she had strong botanical connections as the granddaughter of J.M. Black, a revered figure in the State Herbarium of South Australia (AD) and in the wider community through “Black’s Flora”, the authoritative work on South Australian plants for much of the 20th Century. Marjorie lived with J.M. Black from the death in 1928 of her father, H.W. Andrew (a botanical collector), until J.M. Black’s death in 1951.

While she had her own successful working career (see for instance her entry in the National Pioneer Women’s Hall of Fame: Web ref. 1), it was not

until Marjorie’s retirement in 1974 from the Commonwealth Bank and the completion of a B.A. degree from the University of Adelaide in 1976 that she and her cousin Shirley Clissold, also a granddaughter of J.M. Black, undertook the enormous task of editing J.M. Black’s twelve diaries. Both of them had been part of the editorial committee for the earlier *Memoirs of John McConnell Black* in 1971. The diaries were published in three volumes (Andrew & Clissold 1986, 1991, 2003). The first diary was published with a grant from the South Australian Jubilee 150 Board, but funding was difficult for the rest and it was decided to publish them as part of the *Journal*

of the Adelaide Botanic Gardens. However, once the diaries were finalised for publication by John Jessop with word processing by Tina Eadsforth, both of AD, the Board of the Botanic Gardens Adelaide and State Herbarium decided to publish them in the same book form as Volume I.

Marjorie was also an early member of the Friends of the Adelaide Botanic Gardens, serving as secretary from 1979 to 1982 and later became involved in the running of the Friends' shop in North Lodge (Web ref. 2).

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Web ref. 1: <https://pioneerwomen.com.au/collection/herstory-archive/andrew-1>

Web ref. 2: www.slsa.sa.gov.au/archivaldocs/oh/OH870_5.pdf

Robyn Barker

Neville Forde 1 May 1933 – 25 May 2018

Neville Forde, more usually in his later life associated with birds and their behaviour, passed away in May. He spent some of his earlier scientific life in botanical pursuits, firstly it would appear at the Wimmera Forest Nursery¹ and then in the 1950s at the Northern Territory Herbarium in Alice Springs. Some 400 collections recorded for him in the Northern Territory Herbarium would suggest that he was there from 1953 to at least 1959. By the 1970s he was in Adelaide and employed as a lecturer in the School of Applied Science, Torrens College of Advanced Education.

Here are aspects of his life in Adelaide picked up from scanning the literature for this brief tribute. In 1978 he gave a talk to the SA Chapter of this Society on *Birds, flowers and fruits*², followed by an excursion to Monarto in order to mist-net birds. In 1979 he was a co-author of a paper on birds as pollinators of Australian plants (Ford et al. 1979). His continued involvement with the Gould League and their commitment to environmental education in South Australia was recognised in 2007 by a mention in the SA Parliament by the Hon. R.B. Such³, who commended the group:

The role of the Gould League (now the

¹ There is correspondence listed between Jim Willis and Neville Forde for 1950–1954 giving this address for Neville – see www.austehc.unimelb.edu.au/guides/will/WILLS002.htm

² ASBS Newsletter 15: 11 (1978)

³ Hansard, Parliamentary Procedure Gould Group 22/11/2007 at <http://hansardpublic.parliament.sa.gov.au/Pages/HansardResult.aspx#docid/HANSARD-11-559>

Gould Group), I believe, is very important in schools. Years ago at Underdale at the South Australian College of Advanced Education we had people in the science area under the leadership of Neville Forde who interestingly is a descendant of former Prime Minister Forde. I think he was the shortest-serving prime minister on record. Neville was a very strong supporter of the Gould League and the Gould Group, as were others there, namely Richard Smith, Brian Brock and Bob Sharrad, many of whom have gone on to do famous things. They instilled in primary school teachers who came under their care a passion for science and the natural environment, and they imparted skills and techniques for analysing and understanding science.

In the previous year, 2006, Neville received an “Unsung Hero of SA Science” award for his work on bird and plant interactions (Web ref.).

Vale, Neville.

Reference

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Web ref. <http://friendsofgulfstvincent.org.au/wp-content/uploads/2012/10/Blue-Swimmer-8-Sept-06.pdf>

Robyn Barker

New books

The Australian botanical journals of Allan Cunningham: the Oxley and early King expeditions October 1816–February 1819

By A.E. & T.A. Orchard, Privately Published.

B5, vi + 309 pp. \$45 + \$15 post & packing (within Australia). Enquire for overseas postage.

Obtainable from Tony Orchard, PO Box 3427, Weston Creek ACT 2611 (email: teston3@outlook.com).

Back cover information:

Allan Cunningham was sent to Australia by Sir Joseph Banks in 1816 to collect seeds, bulbs and living plants for the living collection of the Royal Botanic Gardens, Kew, then the premier botanical garden in Europe.

On his arrival in Sydney Governor Macquarie assigned him to the first major inland expedition in New South Wales, commanded by John Oxley, who was charged with exploring the courses of the Lachlan and Macquarie Rivers. After a gruelling five month journey Cunningham arrived back in Sydney to find that Banks had attached him to a major surveying expedition led by Philip King, to continue the exploration of the northern and northwestern coasts of Australia begun a decade earlier by Matthew Flinders. After a seven month's journey the King expedition returned to Sydney, but King, while awaiting favourable weather for his second surveying voyage, decided to visit Van Diemen's Land (Tasmania) to chart the newly discovered Macquarie Harbour. Cunningham joined him, and climbed Mount Wellington near Hobart, as well as exploring Macquarie Harbour.

Between these major expeditions Cunningham undertook shorter explorations in the Sydney district and as far south as Five Islands (Illawarra).

This book provides for the first time a complete transcript of Cunningham's personal journal, detailing his collecting activities on a day-by-day basis, and inserts into his commentary details of his surviving collections in London and Australian herbaria, providing an up-to-date series of names for the species he was collecting.

Cunningham later undertook three more expeditions with King before leading a number of inland expeditions himself, in New South Wales and southern Queensland, and visits to New Zealand and Norfolk Island. These journeys will be the subject of future volumes in this series."

A review for the next issue of this newsletter has been promised by Alex George.

Invasion dynamics

**By C. Hui and DM Richardson
Oxford University Press; 2017.**

ISBN: 9780198745341; 336 pp.; 24.7 x 19.5 x 1.7 cm; PB.

Presently seen at \$AU117; RRP is \$AU157

Humans have moved organisms around the world for centuries but it is only relatively recently that invasion ecology has grown into a mainstream research field. This book examines both the spread and impact dynamics of invasive species, placing the science of invasion biology on a new, more rigorous, theoretical footing, and proposing a concept of adaptive networks as the foundation for future research. Biological invasions are considered not as simple actions of invaders and reactions of invaded ecosystems, but as co-evolving complex adaptive systems with emergent features of network complexity and invasibility. [Publisher's blurb].

Review: <https://invasives.org.au/blog/invasion-dynamics-review/>

Sketching with Stuart: John McDouall Stuart's expedition of 1861-62 seen through the sketches of Stephen King

By Rob Linn; with an introduction by Valmai Hankel.

Friends of the State Library of South Australia, 2017

ISBN 9781876154929 (HB); ISBN 9781876154875(PB)

\$40-\$95 (discounts for members of the Friends of the State Library of South Australia).

McDouall Stuart has been portrayed as travelling light and living off the land on his expeditions but any number of Stephen King's original and mostly unpublished sketches of Stuart's successful north-south crossing of Australia quickly belie that

impression. Featured in a number of them is an orderly array of a large number of pack saddles or the actual horses, 71 when they departed and 54 by the time they reached the northern coastline (Web ref. 1 & 2). That reduction in number presumably reflects some of the natural history specimens that ended up being abandoned. The sketches make a mockery of the fanciful images presented by the British publishers of McDouall Stuart's Explorations in Australia, some of which were apparently based on King's sketches. This is another in the Friends of the State Library of South Australia publications (Web ref. 3) and if you just want to see the illustrations they are all freely available through the State Library of South Australia website. But then you will miss out on Rob Linn's and Valmai Hankel's insightful comments and background.

Web references

- 1: <https://collections.slsa.sa.gov.au/resource/B+486/31>
- 2: <https://collections.slsa.sa.gov.au/resource/B+486/30>
- 3: www.australianpublications.org.au/

Sunflowers

By Stephen A. Harris

Reaktion Books, London; 18 Jun 2018

ISBN: 9781780239262; HB; 240 pp. RRP \$33AU.

www.reaktionbooks.co.uk/display.asp?ISBN=9781780239262

I'm not sure that I would have given a newly published book on the global biological and cultural importance of the Asteraceae/Compositae this title, but that's what it is and those expecting a book just on the topic of sunflowers are in for a surprise. Very favourably reviewed (Web ref. 1), this is the second book by Stephen Harris, Druce Curator of the Oxford University Herbaria, to cover a plant family, the first being his book, *Grasses*, in 2014 with the same publishers. Excerpts from both books are available through Google books and both are available as ebooks but these are usually of a similar price to the book.

Another in the same series has just appeared, this one simply titled *Palm*, authored by Fred Gray (ISBN: 9781780239170). Once again it has been reviewed by Nigel Chaffey and once again the singular *Palm* seems a rather strange title for a book covering the whole gamut of palms, but a look at the other publications in this series

indicates that they have mostly been consistent in their singularity e.g. *Apple*; *Rose*; *Snowdrop*, the only exceptions being *Grasses*, *Sunflowers* and *Weeds*. But, more importantly, this review (Web ref. 2) is also extremely positive.

Web references

- 1: <https://www.botany.one/2018/07/the-cosmopolitan-compositae-or-sunflowers-at-large/>
- 2: <https://www.botany.one/2018/08/a-date-with-history-the-past-present-and-future-of-palms/>

Marianne North: the Kew collection

Royal Botanic Gardens Kew [without author]. Kew Publishing. June 2018

ISBN 9781842466650; 304 pp; HB; 848 botanical paintings in colour. c. \$AU80.

<http://shop.kew.org/marianne-north-the-kew-collection>

Those of you familiar with the Marianne North Gallery at Kew will be interested to see this latest Kew publication, consisting of all of Marianne North's paintings arranged geographically and as they appear in the Gallery, in book form. Whether the book also reflects the overwhelming nature of the Gallery is unlikely but Nigel Chaffey's review regrets that there is little in the way of biography of the remarkable woman who produced the paintings.

Review: <https://www.botany.one/2018/09/to-find-true-botanical-art-go-north/>

Flora of Middle-Earth: Plants of J.R.R. Tolkien's Legendarium

By Walter S. Judd and Graham A. Judd 2017. Oxford University Press

ISBN: 9780190276317; HB, 424 pp. c. \$40AU;

ISBN 9780190276331, ebook c. \$20 AU
<https://global.oup.com/academic/product/flora-of-middle-earth-9780190276317?cc=gb&lang=en&>

For those of you who are Tolkien fans. You can certainly get a feel for the book through the Google preview and there is a review at the reference below.

... botanist Walter Judd gives a detailed species account of every plant found in Tolkien's universe, complete with the etymology of the plant's name, a discussion of its significance within Tolkien's work, a description of the plant's distribution and ecology, and an original hand-drawn illustration by artist Graham Judd in the style of a woodcut print. Among the over three-thousand vascular plants Tolkien would

have seen in the British Isles, the authors show why Tolkien may have selected certain plants for inclusion in his universe over others, in terms of their botanic properties and traditional uses... [From the publisher's blurb]

Web ref.: <https://www.botany.one/2018/05/talking-tolkien-and-plants/>

The orchid hunter: a young botanist's search for happiness

By Leif Bersweden

Short Books. October 2017.

ISBN: 9781780723341; 256 pp; HB (c. \$AU25); also as a PB and ePub.

Another from the orchid obsessed. This time an account of a gap year spent in finding all 52 of Britain's wild orchid species. You can read enough pages from the book through Google Books preview to see whether you want to know more or there is a review at Web. Ref. 1. Subsequently the author has graduated from Oxford and is now undertaking a Ph.D. based at Kew Gardens; you can read more about the latter at Web ref. 2.

Web references

- 1: <https://www.spectator.co.uk/2017/10/will-orchid-mania-be-the-next-gap-year-phenomenon/>
- 2: <https://www.kew.org/blogs/kew-science/the-secret-sex-life-of-anthropomorphic-orchids>

Werner's nomenclature of colours, adapted to zoology, botany, chemistry, mineralogy, anatomy, and the arts

By Patrick Syme

William Blackwood: Edinburgh; First edn 1814; 2nd edn 1821; Facsimile editions 2018.

ISBN: 9781588346216 (Smithsonian Books); ISBN: 9780565094454 (The Natural History Museum) \$AU20-30

Facsimile editions of this book appear to have been released separately in the UK and America at the beginning of the year and the details given indicate that they vary somewhat in page number and size (as well as ISBN). One of them, I think the NHM one, says in the introduction able to be viewed on the web, that it is a blend of both the first and second editions – is that an authentic facsimile?

You can access the original 1814 edition, presumably owned by Darwin on the web (Web ref. 1) but it is words only and without any colour. And once again there is lots of information on the web with two reviews cited (Web refs. 1, 2), the

second from a website mentioned elsewhere (p. 13) in the newsletter.

Web references

- 1: http://darwin-online.org.uk/converted/pdf/1814_Syme_A935.pdf
- 2: <https://mymodernmet.com/werner-nomenclature-of-colours/>
- 3: <https://www.brainpickings.org/2018/02/06/werner-nomenclature-of-colours/>

The feather thief; beauty, obsession, and the natural history heist of the century

By Kirk Wallace Johnson

Viking; Apr 24, 2018.

ISBN 9781101981610; HB, 320 pp; eBook; PB \$27.00

Not botanical, but true-crime based on the theft of 299 bird skins from Britain's Tring Museum in 2009. The aim was to use the coloured feathers from the stolen skins of South American Quetzals and Cotingas and New Guinea Birds of Paradise for making flies for salmon fishing! If you are not sure about this one you can read an extract which covers the breaking in to Tring to obtain the skins (Web ref. 1) or there is plenty of coverage of the book (and the theft) on the web, including a review at Web ref. 2.

Web references

- 1: <https://www.penguinrandomhouse.com/books/534655/the-feather-thief-by-kirk-wallace-johnson/9781101981610/>
- 2: <https://www.npr.org/2018/04/30/607079309/a-weird-but-true-story-takes-flight-in-the-feather-thief>

The Florist: containing 60 plates of the most beautiful flowers regularly disposd[sic] in their succession of Blowing. To which is added an Accurate description of their Colours, with Instructions for Drawing & Painting them according to Nature: Being a New Work intended for the use & amusement of Gentlemen and Ladies Delighting in that Art.

By Robert Sayer

Printed for the author by Bowles & Son: London. 1760.

The title mostly says it all. A colouring book for adults with instructions on the colours to be used for each of the plates. Produced before the nomenclature of colours mentioned earlier

and so the descriptions of the colours is rather prosaic. If you want to have a try the plates can be downloaded from both of the sites listed below.

Web references

- 1: <https://mymodernmet.com/vintage-adult-coloring-book-pages/>
- 2: www.botanicus.org/item/31753002733688

Downloadables

The Naming of Plants – explanations and examples

By Lena Struwe

This manual by Lena Struwe, director of the Chrysler Herbarium at Rutgers University, New Jersey, aims to clarify the names of plants for those who work with plants and their products (Web ref. 1). It is an excellent introduction to the topic and is free to download and use by anybody interested in botany, horticulture, agriculture, herbal medicine, commercial plant products, and edible plants. (The second page of the manual provides detailed copyright and usage information.). The author has also been running a web page *Botanical Accuracy.com* (Web ref. 2) since 2013 and this is worth a browse as well, even though the number of postings is considerably less since its inception. It is particularly focused on botanical mistakes associated with the commercial use of plants.

Web references

- 1: <https://botanydepot.com/2018/08/21/manual-the-naming-of-plants-explanations-and-examples-by-lena-struwe/>
- 2: www.botanicalaccuracy.com/

Trees for life in Oceania: conservation and utilisation of genetic diversity

By Lex Thomson, John Doran & Bronwyn Clarke (eds)

The Australian Centre for International Agricultural Research: Canberra; August 2018. ACIAR Monograph 201; ISBN: 978 1 925746 18 1

The Australian Centre for International Agricultural Research (ACIAR) has been supporting research in South-East Asia and the Pacific islands on the growing, management, processing and marketing of indigenous and exotic tree species since the early 1990s. Especially important are those tree crops that are well adapted to the local, diverse conditions; are amenable to production by smallholders as well as larger operators; provide a range of services to local communities; and afford possibilities for high-value local processing.

This book, prepared with input from 85 specialists, including many Pacific island foresters and horticulturists, provides information on 53 Oceanian species. It highlights their valuable genetic diversity and provides recommendations for conserving and making best use of this diversity. This unique publication will guide sustainable utilisation of those species that are vital to the Pacific islands and elsewhere in the developing tropics. It will be invaluable for those planning and funding research on tree species in the Asia-Pacific region. It will also help landowners involved in reforestation and agroforestry, as well as those involved in conservation and domestication of tree and shrub species in Oceania. [Adapted slightly from webpage]

The book: <https://www.aciar.gov.au/publication/Trees-life-Oceania>

Three new journals

Bionomina

Bionomina is an international journal of biological nomenclature and terminology produced by the same publishers as *Zootaxa* and *Phytotaxa*. The journal is not as active as its sister journals, the last volume being produced in 2017, but that particular volume is interesting since it deals with the debate surrounding the need for physical reference specimens for zoological nomenclatural purposes; it also addresses some of the problems faced by those trying to undertake field work on their chosen beast. Unfortunately not all papers are freely available.

Web ref. www.mapress.com/j/bn/article/view/bionomina.12.1.6

Two new journals on people and nature

There are two new journals in the pipeline, both of them yet to appear. *People and Nature* is another product of the British Ecological Society and will be “a broad-scope, open access journal publishing work from across research areas exploring relationships between humans and nature” while *Plants, People, Planet* is a product of the New Phytologist Trust. It appears to cover similar – albeit more plant-focused – territory...

Web references

1. <https://www.britishecologicalsociety.org/new-journal-people-nature/>
2. <https://www.newphytologist.org/journals/plants-people-planet>

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The Australasian Systematic Botany Society is an incorporated association of over 300 people with professional or amateur interest in botany. The aim of the Society is to promote the study of plant systematics.

Membership

Membership is open to all those interested in plant systematics. Members are entitled to attend general and chapter meetings, and to receive the Newsletter. Any person may apply for membership by filling in a "Membership Application" form, available on the Society website (www.asbs.org.au), and forwarding it, with the appropriate subscription, to the Treasurer. Subscriptions become due on 1 January each year.

The ASBS annual membership subscription is AU\$45; full-time students \$25. Payment may be by credit card or by cheques made out to Australasian Systematic Botany Society Inc., and remitted to the Treasurer. All changes of address should be sent directly to the Treasurer as well.

ASBS publications

Australasian Systematic Botany Society Newsletter

Back issues

Back issues of the Newsletter are available from Number 27 (May 1981) onwards, excluding Numbers 29, 31, 60, 84–86, 89–91, 99, 100, 103, 137–139, and 144. Here is the chance to complete your set.

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Australian Systematic Botany Society Newsletter No. 53

Systematic Status of Large Flowering Plant Genera

Edited by Helen Hewson, 1987

This Newsletter issue includes the reports from the February 1986 Boden Conference on the "Systematic Status of Large Flowering Plant Genera". The reports cover: the genus concept; the role of cladistics in generic delimitation; geographic range and the genus concepts; the value of chemical characters, pollination syndromes, and breeding systems as generic determinants; and generic concepts in the Asteraceae, Chenopodiaceae, Epacridaceae, *Cassia*, *Acacia* and *Eucalyptus*.

Cost: Number 53: \$5, plus \$1.75 postage (in Australia)

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Evolution of the Flora and Fauna of Arid Australia (book)

Edited by W.R. Barker & P.J.M. Greenslade.

Peacock Publications, ASBS & ANZAAS, 1982

This collection of more than 40 papers will interest all people concerned with Australia's dry inland, or the evolutionary history of its flora and fauna. It is of value to those studying both arid lands and evolution in general. Six sections cover: ecological and historical background; ecological and reproductive adaptations in plants; vertebrate animals; invertebrate animals; individual plant groups; and concluding remarks.

Cost: \$20, plus \$10 postage (in Australia).

This book is almost out of print. There are a few remaining copies.

To order a copy of this book email Bill Barker at: bill.barker@sa.gov.au

History of Systematic Botany in Australasia (book)

Edited by P.S. Short. A4, case bound, 326 pp. ASBS, 1990

No longer available

Australasian Systematic Botany Society Newsletter

The Newsletter keeps ASBS members informed of Society events and news, and provides a vehicle for debate and discussion. In addition, original articles, notes and letters (not exceeding ten published pages in length) will be considered.

Every effort is taken to distribute the Newsletter quarterly; delays or rare combined issues are attributable usually to the availability of the Editors who act in a voluntary capacity rather than to lack of copy. As soon as possible after compilation of each issue a searchable pdf version (in full colour) is placed on the Society web site and announced to members by email, and printed copy (in grey scale) is produced and distributed to members who have requested it.

Citation: abbreviate as *Australas. Syst. Bot. Soc. Newslett.*

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